Lower Hunter Public Transport Liaison Group

Sustainable Transport in the Lower Hunter Region

Vol 2: Regional Context

Issues Paper

prepared for

Cessnock City Council

Lake Macquarie City Council

Maitland City Council

Newcastle City Council

Port Stephens Council

by ***Transit Planners*** ***Pty Ltd***

ACN 060 372 312

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Sustainable Transport in the Lower Hunter Region

1 Overview

1.1 Introduction

The community of the Lower Hunter Region is moving towards ecological sustainability in its urban environment. But much more needs to be done to ensure that the changes that this entails will be further promoted, debated and understood.

One significant aspect of ecological sustainability revolves around where people live, work, shop and recreate, how they travel between these locations, and what choices they have about the modes of transport they can use.

The Vision Statements adopted by the Councils in the Lower Hunter dictate that alternative transport systems are essential for the region to become sustainable. Their urban development strategies invoke the concepts of mixed use urban centres and transit-oriented development. These strategies advocate higher residential and employment densities around designated urban centres where people can find local employment or can travel within the region to neighbouring centres of employment. It is envisaged that these nodes will be served by high quality public transport services, with direct links to local and regional centres.

These strategies have several implications for transport:

- The number of trips people make would be reduced
- The length of trips would be reduced
- A greater proportion of trips could be made by modes other than the private car
- Pollution and congestion caused by private car usage would be reduced.

The challenge now being faced is to establish appropriate priorities in the local, state and national transport agendas for support of sustainable economic development in the Hunter Region through the provision of sustainable transport, and in particular effective public transport.

Local Councils are not service providers for alternative transport systems. Their roles are related to leadership, lobbying, facilitation, community debate, some infrastructure provision, development planning and funds management. However, these roles can be sufficient to influence other levels of government to acknowledge and implement the changes that are required for an ecologically sustainable approach to urban management.

It is generally accepted that the private car will remain the dominant mode of travel. However, unless the rate of growth in its demand for road space is curtailed, the level of congestion on our roads and air pollution will become unacceptable. There is no point in projecting that urban areas in the Lower Hunter should become as congested as Sydney before anything is done about it. We have the opportunity to retain the benefits and attractions of the Lower Hunter environment if the appropriate action is taken now.

The Federal Government has made it quite clear that sustainability is fundamental to the future development of the nation's transport systems. It published a Green Paper in November 2002 about *Auslink*, a new initiative to plan, fund and manage Australia's national land transport infrastructure[1]. It proposes that

[1] *Auslink: Towards the National Land Transport Plan* Dept of Transport and Regional Services, Canberra, 2002

AusLink's principal objective should be promotion of sustainable national and regional economic growth, development and connectivity.

Economic growth and development provide greater opportunities for current and future generations through improved social services and infrastructure, more employment and sustainable regions. While growth is the principal vehicle for many aspects of a better future, it should be consistent with broader, long-term economic, environmental, social and safety outcomes - that is, it must be sustainable.

Sustainable growth includes ongoing efforts to improve safety, social impacts and environmental consequences of transport, as well as economic issues. Without sustainability, we risk leaving a legacy of poorer economic prospects, a more degraded environment and a range of other costs for future generations. The network's development should reflect a balance between improving the benefits and containing and reducing the costs of land transport investment, such as congestion, crashes, pollution and energy depletion.

Critical segments of the national road, road, sea and air networks are located in the Hunter Region, and they are used for local and regional as well as national transport tasks. The stage for pursuing sustainable transport and infrastructure strategies has been set.

This Paper has been designed to stimulate debate on how regional sustainability in transport can be achieved. It examines the transport situation in the region at present, and discusses some alternative transport modes and management approaches that might be adopted in the future. It presents an Action Plan aimed at achieving coordination in planning and investment which will produce an integrated regional transport system that will allow the desirable sustainability targets to be achieved.

1.2 Context

From a regional perspective, development of sustainable transport in the Lower Hunter from its inception to its current state has been at best piecemeal and at worst ad hoc and ineffective.

There are several transport corridors and facilities that can be used to form the basis of a well-functioning , efficient and effective sustainable transport system. These include the rail line between Newcastle and Sydney, the rail lines between Newcastle, Upper Hunter and Dungog, and many vacant former rail and tram corridors.

Recent additional infrastructure such as the Charlestown Bypass and future projects such as the National Highway extension of the F3 to Branxton provide significant opportunities to enhance sustainability. However, the majority of the existing public transport network is founded on archaic infrastructure and work practices, and is lacking in imagination and innovation.

The purpose of this Issues Paper is to assess what is required to achieve effective improvements in sustainable transport modes in the Lower Hunter in the short, medium and long term. To do this effectively, it attempts to create a vision for the sustainable transport systems in the future. The details of this vision will emerge out of the progressive implementation of the short term actions.

The Paper works through four general topics:

- outline of the existing urban environment, planning policy and social characteristics in the Lower Hunter Region
- background to the current transport situation in the region
- how sustainable transport has been provided in other regions
- what we have to do to advance from the current situation.

Sustainable transport is considered for travel:

- within urban centres
- between urban centres

- between rural areas and urban centres.

Although the Paper assumes the principles of sustainable transport as argued in planning and environment literature, it attempts to summarise these as a basis for the Action Strategies that are put forward.

1.3 Paper Structure

In this Issues Paper, the Lower Hunter Region comprises the five Local Government Areas of Cessnock, Lake Macquarie, Maitland, Newcastle and Port Stephens.

The Paper is in two volumes.

- Volume 1, Action Strategies, outlines:
  - ◊ urban sustainability: what it means, and how it impacts on transportation (Chapter 2)
  - ◊ opportunities for advancing travel by sustainable modes in the Lower Hunter, with particular reference to the roles of local government, and with some examples of specific projects that can be considered in both the short and long term (Chapter 3)
  - ◊ principles, policies, issues and actions that need to be considered in the Lower Hunter as Action Strategies to achieve a more sustainable transport regime, (Chapter 4).
- Volume 2, Regional Context, outlines:
  - ◊ a profile of the Lower Hunter Region in relation to transport issues (Chapter 2)
  - ◊ the existing public transport systems in the Lower Hunter (Chapter 3)
  - ◊ regional initiatives within the context of transportation (Chapter 4)
  - ◊ aspects of public transport that need to be understood as the basis for a more sustainable transport system (Chapter 5)
  - ◊ sustainable transport projects that have been undertaken in other regions (Chapter 6)
  - ◊ references to reports on sustainable transport issues (Chapter 7).

After the State Election in March 2003, the government has announced many changes to the names, functions and responsibilities of several government agencies, and has instigated short term reviews of some transport issues in the Hunter Region. This Issues Paper has not been updated to reflect these changes.

2 Regional Profile

2.1 Regional Population

This Paper has been developed for the Lower Hunter Region, which is made up of five local government areas (LGAs) with the census populations as shown (rounded to the nearest 100):

LGA	1996	2001
Cessnock	44 400	45 200
Lake Macquarie	170 500	177 600
Maitland	49 900	53 800
Newcastle	133 700	137 300
Port Stephens	51 300	56 700
Region Total	449 800	470 600

This Paper concentrates on the urban areas of the Region, where 91% of the population lives. The identified urban centres (localities with more than 5000 people) with the local government area and the populations are shown in Table 1.

Table 1: Urban Areas in Lower Hunter

Urban Area	Local Government Area	1996 Population
Newcastle / Lake Macquarie (excluding Stockton)	Newcastle, Lake Macquarie	266 558
Maitland	Maitland	35 252
Cessnock	Cessnock	16 879
Tomaree Peninsula	Port Stephens	14 699
Morisset Peninsula - Cooranbong	Lake Macquarie	13 046
Kurri Kurri - Weston - Abermain	Cessnock	12 932
Raymond Terrace	Port Stephens	12 332
Beresfield - Tarro - Woodberry	Maitland, Newcastle	8 427
Wangi Wangi	Lake Macquarie	8 106
Tilligerry Peninsula	Port Stephens	5 316
Medowie	Port Stephens	5 294
Stockton - Fern Bay	Newcastle, Port Stephens	5 058
Thornton *	Maitland	4 696
Region Urban Total		408 595

** Although Thornton had less than 5000 people in 1996, it is included as an urban area because of the growth which has occurred since then.*

In 1996, 91% of the region's population of 449 770 people lived in these urban areas. The remainder (41 175) lived in small towns, villages and rural areas. The region's population had grown to 470 613 in 2001, an average growth rate of 4169 (1%) each year[2].

The Newcastle Urban Centre, as defined by the Australian Bureau of Statistics, covers the contiguous populated parts of the Newcastle and Lake Macquarie Local Government Areas. This extends from Fern Bay to Caves Beach on the coast, westward to Sandgate, Blue Gum Hills, West Wallsend and Fassifern, and south to Kilaben Bay. In 1996 it had a population of 271 100 people.

The Newcastle Urban Centre excludes the localities of Beresfield, Cooranbong, Dora Creek, Minmi, Morisset, Morisset Peninsula, Non-urban areas, Wangi Wangi and Wyee. When the population of these localities is added to the Newcastle Urban Centre, the total population of 304 200 equates to the 1996 census population of these two Local Government Areas.

[2] Sources: Australian Bureau of Statistics: 1996 and 2001 Census data. Complete data for small areas from the 2001 Census is not available until June 2003.

2.2 Travel Patterns

Transport NSW (Dept of Transport) recently published data on travel characteristics in the Lower Hunter Region (which comprises the five LGAs of the Lower Hunter) in 1999[3]. This data is more up-to-date than the data from the 1996 census.

Key indicators in Lower Hunter travel patterns are shown in Table 2.

Table 2: Travel in Lower Hunter, 1999

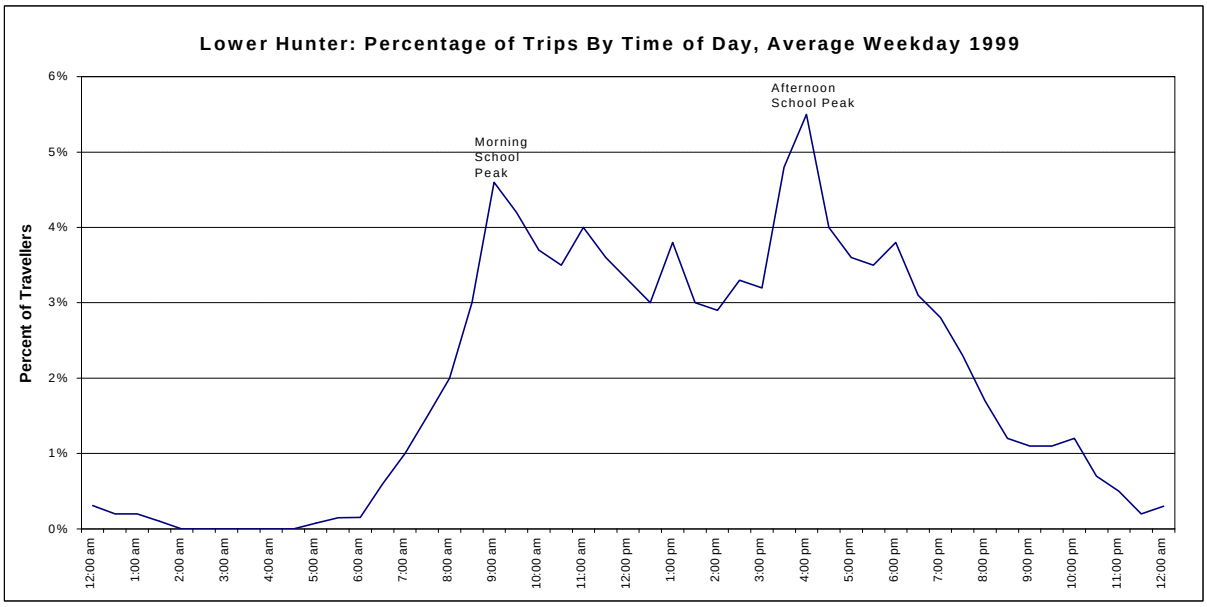
Number of trips by residents	Weekday	1 906 000
	Weekend day	1 645 000
Trip rates, average weekday	Per person	4.1
	Per household	10.7
Trip purpose, average weekday	Social / recreation	25%
	Serve passenger	18%
	Shopping	20%
	Commuting	12%
	Other work-related	8%
	Personal business	10%
	Education / Child care	7%
Trip mode, average weekday	Vehicle driver	56%
	Vehicle passenger	25%
	Train	1%
	Bus	4%
	Walk only	12%
Total distance travelled per person	Average weekday	39km
Total vehicle km travelled per person (vkt)	Average weekday	24km
Average trip length	Average weekday	10km
Average number of vehicles	Per household	1.5

It is not valid to apply travel patterns surveyed in Sydney to the Lower Hunter area because of vastly different urban, social and operational conditions. This is demonstrated clearly in a comparison of the percentage of travel being undertaken during each hour of the day. In the Lower Hunter, this is noticeably different to both Sydney and Wollongong.

In the Lower Hunter, apart from school peaks, the spread of trips throughout the day is remarkably even. During each half-hour of the day between 8.00am and 6.00pm, between 3% and 4% of the total day's trips are made. The morning peak reaches 4.5% at 8.30am and the afternoon peak reaches 5.5% at 3.30pm. This has profound implications for public transport planning. It shows that, apart from school services, there is no justification for reducing the service frequencies during the traditional 'off-peak' hours, because there are nearly as many trips being made then as there are during the 'peak' hours.

Congestion in peak hours occurs mostly because of an increased concentration of traffic in the same direction rather than because of more trips being made. Due to the more dispersed locations of employment, there are multiple peak traffic flows, some of which conflict with each other at key intersections.

[3] *Travel in Newcastle and Wollongong,* Issues Paper 2002/01, Transport NSW, Feb 2002



2.3 Journey to Work

From the data presented in Table 2, commuting to and from work represents 12% of the total trips made in the Lower Hunter on an average weekday. However, detailed analysis of travel patterns based on census data is only available for the Journey to Work. Care is needed to retain this data in its true perspective in relation to total trips.

- The dominant trip purpose is social / recreation (25% of all trips)
- Commuting ranks fourth as a trip purpose.

The more detailed Journey to Work data comes from the 1996 Census. Table 3 gives an indication of the distance people travelled to work at that time. It shows the number of workers who travel each day within their home Local Government Area, between LGAs in the Lower Hunter Region, and between other parts of the Greater Metropolitan Area and the Lower Hunter.

Equivalent data from the 2001 Census is not likely to be available until some time in 2003.

To achieve better comparisons between LGAs in the Lower Hunter, the Newcastle CBD is listed separately to the rest of the Newcastle LGA due to the regional nature of employment in the Newcastle CBD. Hence references to 'Newcastle LGA' (in this section only) do not include the Newcastle CBD.

There are 179 675 journey to work trips each day that have an origin and/or destination in the Lower Hunter.

- 175 500 (98%) of these trips have an origin in the Lower Hunter
- 153 168 (85%) have a stated destination in the Lower Hunter.

Table 3: Journey to Work in Greater Metropolitan Regions: 1996

includes Trips between Lower Hunter and Central Coast, Sydney-Illawarra

	Trip Destination									
Trip Origin	**Cessnock**	**Lake Macquarie**	**Maitland**	**Newcastle**	**Newcastle CBD**	**Port Stephens**	**Central Coast**	**Sydney-Illawarra**	**Other ***	**Grand Total**
	Number of Trips to Work									
Cessnock	7632	894	1435	1468	317	243	241	378	3104	15712
Lake Macquarie	636	30411	729	18806	5225	893	2542	2208	5735	67185
Maitland	914	938	8666	4462	1036	984	71	410	2810	20291
Newcastle	432	6797	1117	28499	7016	1623	353	1260	4143	51240
Newcastle CBD	15	191	29	743	561	67	16	145	269	2036
Port Stephens	125	688	808	3727	883	9983	60	620	2142	19036
Central Coast	84	1184	62	701	367	46				2444
Sydney-Illawarra	106	683	191	469	178	104				1731
Grand Total	9944	41786	13037	58875	15583	13943	3283	5021	18203	179675
	Percentage of Origin Trips that go to each Destination									
Cessnock	49%	6%	9%	9%	2%	2%	2%	2%	20%	15712
Lake Macquarie	1%	45%	1%	28%	8%	1%	4%	3%	9%	67185
Maitland	5%	5%	43%	22%	5%	5%	0%	2%	14%	20291
Newcastle	1%	13%	2%	56%	14%	3%	1%	2%	8%	51240
Newcastle CBD	1%	9%	1%	36%	28%	3%	1%	7%	13%	2036
Port Stephens	1%	4%	4%	20%	5%	52%	0%	3%	11%	19036
Central Coast	3%	48%	3%	29%	15%	2%				2444
Sydney-Illawarra	6%	39%	11%	27%	10%	6%				1731
Grand Total	6%	23%	7%	33%	9%	8%	2%	3%	10%	179675
	Percentage of Destination Trips that come from each Origin									
Cessnock	77%	2%	11%	2%	2%	2%	7%	8%	17%	9%
Lake Macquarie	6%	73%	6%	32%	34%	6%	77%	44%	32%	37%
Maitland	9%	2%	66%	8%	7%	7%	2%	8%	15%	11%
Newcastle	4%	16%	9%	48%	45%	12%	11%	25%	23%	29%
Newcastle CBD	0%	0%	0%	1%	4%	0%	0%	3%	1%	1%
Port Stephens	1%	2%	6%	6%	6%	72%	2%	12%	12%	11%
Central Coast	1%	3%	0%	1%	2%	0%				1%
Sydney-Illawarra	1%	2%	1%	1%	1%	1%				1%
Grand Total	9944	41786	13037	58875	15583	13943	3283	5021	18203	179675

Data compiled from Journey to Work 1996, Table 02, Transport NSW

* 'Other' includes travel to places outside the Greater Metropolitan Region, to places that could not be identified, and where destination was not stated

To assist with interpreting the data in this table, an example is taken from the journey to work data for Maitland.

- 20291 people from Maitland travel to work, 8666 within Maitland itself and 4462 to Newcastle (outside the CBD)
- 43% of workers who live in Maitland travel to work in Maitland, and 22% travel to work in Newcastle (outside the CBD)
- Of the people who work in Maitland, 66% live in Maitland and 9% live in Newcastle (outside CBD).
- In absolute numbers, there are 4462 workers who travel each day from Maitland to Newcastle, and 1117 workers who travel each day from Newcastle to Maitland.

There are 15583 workers who travel to the Newcastle CBD, 9% of the journey to work trips. 45% of these come from Newcastle (outside CBD) and 34% come from Lake Macquarie. Less than 7% come from each of Port Stephens, Maitland and Cessnock.

Overall, there are large numbers of workers who travel considerable distances from their homes each day to and from work.

Generally, about half of the workers in each local government area work locally. The other half travel to another local government area. In Newcastle, when the LGA and CBD figures are combined, 69% of workers work locally.

With the exception of Newcastle, over 65% of people working in a local government area come from that area. In Newcastle, the figure is 48%, due to the more regional nature of many of the employment opportunities in Newcastle.

The vast majority of workers from other LGAs who travel to Newcastle LGA work in places other than the CBD. This has very significant implications for transport planning.

The greatest 'leakage' outside the region occurs in Lake Macquarie.

- 2542 people travel from Lake Macquarie to the Central Coast
- 2208 people travel from Lake Macquarie to Sydney and Illawarra regions
- a further 5735 travel to the Upper Hunter or other unstated destinations
- 1184 people travel from the Central Coast to Lake Macquarie.

2.4 Public Transport Usage

In the Lower Hunter, 4.6% of journey to work trips are made by public transport (train, bus, ferry and taxi)[4]. Not surprisingly, the percentage is higher in Newcastle / Lake Macquarie (5.2%) and Maitland (5.0%), and lower in the other areas of the Lower Hunter (2.1%). As shown in Vol 2, §2.3, journey to work trips represent only 12% of the total trips made each day.

Transport NSW data from 1999 shows that, for all trip purposes in the Lower Hunter, 0.8% were made by train and 4.2% by bus, giving a total of 5.0% or 95 000 trips by public transport on an average weekday: 15 000 by train and 80 000 by bus. Nominally, half of these bus passengers travel on Newcastle Buses, and the other half on private buses[5].

As shown in Vol 2, §2.6, various social surveys undertaken in the Lower Hunter confirm that the biggest groups of people using public transport are youth, elderly, low-income earners and those who live in households with one or less vehicles.

Surveys at the University of Newcastle in March 2003 showed that on a typical day 10% of people arriving at the Callaghan campus come by public transport (6% by bus and 4% by train). This figure increases to over 14% in peak periods. However, while train patronage has risen by over 6% since 1999, bus patronage has fallen by nearly 19%. Most of the reduction has occurred during the morning peak period[6]. Table 4 shows the modal split for each hour of the day on Tuesday of Week 3 in Semester 1.

In previous years, public transport accounted for as much as 13% of total day arrivals at the University, and for 17% of arrivals over one hour in the morning.

[4] *1996 Census Community Profiles*, produced by Transit Planners from Australian Bureau of Statistics data

[5] Deductions based on patronage data for Newcastle Buses published in State Transit Authority Annual Report 1999-2000.

[6] *University of Newcastle Travel Modes Survey Semester 1, 2003* Transit Planners, June 2003

Table 4: Modal Split for Arrivals at Univeristy of Newcastle, March 2003

Modal Split by Hour of Day: Tuesday, Week 3, Semester 1									
Time Period		Car as	Car as	Total	Bus	Train	Total	Walk	Cycle
From	To	Driver	Passenger	by Car			by P T		
8:00	9:00	50.7%	13.7%	64.4%	8.2%	5.4%	13.7%	19.6%	2.3%
9:00	10:00	50.4%	14.6%	65.0%	5.7%	4.1%	9.8%	23.6%	1.7%
10:00	11:00	44.6%	13.8%	58.5%	8.7%	5.8%	14.5%	25.8%	1.1%
11:00	12:00	49.9%	12.5%	62.4%	7.7%	3.7%	11.4%	24.6%	1.6%
12:00	1:00	47.3%	12.8%	60.1%	6.2%	3.6%	9.8%	28.0%	2.1%
1:00	2:00	52.0%	17.1%	69.1%	5.8%	1.9%	7.7%	21.9%	1.3%
2:00	3:00	54.4%	14.1%	68.6%	5.4%	2.9%	8.3%	21.2%	1.9%
3:00	4:00	54.9%	20.9%	75.7%	3.8%	1.3%	5.1%	17.6%	1.6%
4:00	5:00	63.5%	20.9%	84.4%	2.6%	1.9%	4.5%	9.5%	1.5%
5:00	6:00	62.5%	18.7%	81.2%	2.3%	3.5%	5.8%	12.0%	1.0%
6:00	7:00	64.2%	16.7%	81.0%	2.3%	1.7%	3.9%	14.0%	1.1%
Total day		52.9%	15.5%	68.4%	5.9%	3.8%	9.6%	20.2%	1.7%

This modal split data relates to the mode of travel for people entering the Callaghan Campus. The walk mode includes the large number of students who live in the residential colleges and the nearby suburbs, as well as those who walk from cars parked in streets outside the campus. When those who park outside are counted in the car mode, the modal split for cars goes up to 73.2% and for walk goes down to 15.4%.

• Bus Services

Patronage on Newcastle Buses services is predominantly people who are eligible for concession fares. In 1998-99, out of an annual patronage of 13million on Newcastle Buses:

- 1 690 000 (13%) were adult passengers who paid full fare
- 2 380 000 (18%) were adults and children who travelled on concession fares (other than in the following two categories)
- 3 600 000 (28%) were adults who used the pensioner / senior citizens all-day ticket
- 5 300 000 (41%) were students who travelled to and from school on the School Student Travel Scheme[7].

On the private buses, it is understood that students travelling to and from school on the School Student Travel Scheme comprise at least 75% of total patronage, but accurate data is not available[8].

Analyses of bus patronage in recent years have shown divergent trends. While official figures show total annual patronage on Newcastle Buses has been falling since 1996, patronage in certain categories has increased. In the period 1996-97 to 1998-99 (the latest for which this data is available):

- Total patronage fell by 0.4%, but
- Adult passengers paying full fare increased by 2%
- School student patronage increased by over 10%
- Concession and pensioner / senior citizens travel fell by 9%.

[7] Data supplied by Newcastle Bus and Ferry Services to Newcastle City Council for its Indicators of a Sustainable Community Report, 2000-2001.

[8] Inferences drawn from *Inquiry into the School Student Transport Scheme*, Public Accounts Committee Feb 2002, and *Review of fares for taxis, private buses and private ferries in NSW: An Issues Paper,* Independent Pricing and Regulatory Tribunal, Feb 2002

The review of the Newcastle bus network introduced by State Transit in March 2002 has not redressed the patronage decline[9], partially because it did not adequately understand the travel demands of the market sectors and the extent to which these are different to travel patterns in Sydney. It is hoped that fine tuning of the network and improved timetable coordination introduced in September 2002 will have a positive impact on patronage.

• Train Services

Accurate patronage data on train services is not easy to obtain, but it could be analysed as part of a regional transport planning project. Data published by CityRail relies on sample barrier counts and extrapolations which don't necessarily provide reliable data for regional planning purposes.

In 1996/97 a total of 2.9 million passengers passed through the barriers of Newcastle, Civic, Wickham and Hamilton stations, with most passengers using Hamilton Station[10]. The distribution of this patronage over the trains in the current timetable is shown in Table 5.

Table 5 summaries CityRail estimates of average daily patronage at railway station in the Lower Hunter in 2000[11]. Field observations indicate that at some of the minor stations, actual patronage is higher than the CityRail estimate.

More accurate data is available for University (Warabrook) station from regular surveys that are undertaken for the University of Newcastle. In March 2003 the estimated daily patronage was about 1800, including use of late night trains by students from the residential colleges travelling to and from Newcastle City Centre[12].

Table 5: Average Daily Patronage at CityRail Stations in Lower Hunter, 2000

Station	Patronage	No of Trains	Station	Patronage	No of Trains
Inner City Line			**Hunter Valley Lines**		
Newcastle	2740	178			
Civic	1660	174	Waratah	840	94
Wickham	1540	149	Warabrook	1340 (a)	93
Hamilton	2300	178	Sandgate	100	55
Central Coast Line			Hexham	100	55
Broadmeadow	2260	84	Tarro	60	55
Adamstown	160	48	Beresfield	860	93
Kotara	80	48	Thornton	480	93
Cardiff	1220	82	Metford	340	93
Cockle Creek	80	48	Victoria Street	960	93
Teralba	120	48	East Maitland	200	55
Booragul	240	49	High Street	220	55
Fassifern	1120	84	Maitland	1320	94
Awaba	140	51	Telarah	480	82
Dora Creek	200	51	Lochinvar	10	8
Morisset	1840	82	Greta	20	8
Wyee	180	58	Branxton	20	8

(a) See additional information in paragraph above table

[9] *Better Buses Program - Matching Service to Travel Pattern* Presentation by State Transit at Travel Demand Management Seminar, Sydney, Sept 2002

[10] NSW Parliamentary Standing Committee on State Development's Report on *Future Employment and Business Opportunities in the Hunter Region,* July 1998

[11] *A Compendium of CityRail Travel Statistics* CityRail, July 2001

[12] *University of Newcastle Travel Modes Survey Semester 1, 2003,* Transit Planners, June 2003

CityRail is planning for growth of 20% in patronage on the Hunter Lines, and has made provision for this in the order for new passenger carriages[13].

2.5 Population Profiles as Public Transport Indicators

Census data can be used to produce indicators for one of the sustainable transport options, namely public transport. Generic research is available on the potential of other sustainable transport modes, such as cycling and walking, but most of it is not specific to the Lower Hunter Region.

In determining the potential for public transport usage, the population characteristics of localities in the Lower Hunter have been examined. These characteristics can be used by planners to determine the most appropriate type of public transport to achieve the best results. They can be used as indicators towards trends in public transport usage, as well as the propensity for the use of public transport if the services are made more attractive and effective.

A set of profiles has been prepared for the Lower Hunter based on the data from the 1996 Census. (These profiles can be updated when the full sets of data from the 2001 Census are released late in 2002.) The profiles relate to the entire local government areas, the conjoint urban areas, and to each of the isolated urban localities, villages and rural areas, showing both absolute numbers and percentage of the locality total for each aspect of the profile. The total values for each locality are shown as a percentage of the total area to allow comparisons to be made between localities.

The profiles considered to be especially relevant to public transport are:

- ◊ Total population
- ◊ Age of population
- ◊ Attendance at Education Institutions
- ◊ Labour Force Status
- ◊ Method of Travel to Work
- ◊ Weekly Household Income
- ◊ Number of Vehicles at Households.

Within each of these profiles, certain characteristics are considered to be useful indicators of the potential for public transport usage.

- Population
  - ◊ 10-19 Age Group: Includes youth at their most mobile time, especially those who cannot gain a driver's licence, and those who are least able to afford a car.
  - ◊ Over 55 Age group: As people retire and grow old, time is less sensitive for them, and they tend to accept travel by public transport in preference to driving themselves for an increasing number of activities. As people age, they may also become less able to drive a car.
- Education
  - ◊ Those at secondary school, and full-time at TAFE and University, are in a lifestyle that can accept public transport travel, even apart from economic considerations.
- Labour Force
  - ◊ Those who are employed full time may be in work situations where it is not necessary, or financially attractive, to have a car lying idle all day just to enable them to travel to work.
  - ◊ Those who are unemployed looking for full time work may be in economic circumstances where public transport is acceptable.
  - ◊ Those not in the labour force may be in a position to use public transport for some of their trips for personal travel, particularly if the household car is in use by others.

[13] Brief for StateRail Study on Development of Newcastle Railcar Fleet, March 2001

- Travel to Work
  - ◊ Those who already use public transport for travel to work are already pre-disposed to using public transport, and may be receptive to using it for more of their trips.
- Household Income
  - ◊ Households with low levels of income are likely to consider using public transport for economic reasons, especially with the availability of concession fares.
- Household Vehicles
  - ◊ Where households have no, or only one, vehicle, some members of the household are going to be without a car for at least some of the time. They can be encouraged to use public transport for some of their trips.

The extent to which individuals in the population may conform to more than one of these characteristics increases their propensity to use public transport.

A relative weight has been applied to these characteristics in order to develop an index or ranking for localities in respect of their propensity to respond to public transport initiatives. The ranks are given for both the absolute number of people (relates to population size) and to percentage of the population with characteristics conducive to public transport usage.

Within Newcastle / Lake Macquarie, the locality with the greatest potential for public transport usage based on population size is Mayfield, and based on percentage of population is Adamstown. At the other end of the scale, the locality with the least potential for public transport usage based on population size is Macquarie Hills, and based on percentage of population is Eleebana.

In the other LGAs, the localities with the greatest propensity for public transport usage are:

- Cessnock North and Kurri Kurri in Cessnock
- East Maitland and Rutherford in Maitland
- Raymond Terrace and Nelson Bay in Port Stephens.

This work provides the basis for further development of transport indicators based on population census data. The localities with the highest propensities for public transport usage would normally be the ones where pilot projects for better services would be undertaken.

The population profile data for a selection of urban localities in Cessnock, Maitland, Newcastle / Lake Macquarie, and Port Stephens, including the public transport propensity index, are shown in Tables 6, 7, 8 and 9.

Data from the 2001 Census will be released in June 2003 at the level of detail that would enable updating of the 1996 community profile data for individual localities.

Table 6: Cessnock Public Transport Propensity

1996 Community Profiles Relevant to Public Transport: Urban Localities

Profile	PT Index Weight	Cessnock LGA	Locality								
			Abermain-Neath	Bellbird	Branxton	Cessnock North	Cessnock South	Greta	Heddon Greta	Kurri Kurri	Weston
1996 Census Data											
Population		44362	2598	5446	1893	7309	4124	1841	1038	7195	3139
Youth (aged 10-19)	1.0	6815	421	810	316	1079	610	252	175	1093	544
Seniors (aged 65 +)	1.5	5637	283	788	199	1323	620	188	46	1011	406
Tertiary Students											
- TAFE full time	1.0	284	13	36	9	31	31	12	6	60	26
- University fulltime	1.0	231	21	30	10	38	23	12	5	37	12
Labour Force		18072	976	2211	810	2825	1680	725	518	2931	1233
Employed fulltime	0.5	10516	541	1281	526	1603	919	444	325	1746	704
Seeking fulltime work	1.5	2000	137	240	51	287	192	98	32	333	188
Not in labour force	1.0	14778	917	1855	569	2818	1498	588	224	2575	1119
Trips to Work		12491	656	1554	608	1998	1148	520	384	2076	833
Public Transport	1.5	281	27	24	22	40	24	31	13	27	15
Car driver		9448	519	1161	445	1417	824	393	314	1597	635
Car passenger		1730	86	262	92	331	178	72	43	303	112
Households		15767	957	2012	656	2517	1591	662	331	2710	1155
WeekIncome<$700	1.5	8583	596	1113	263	1420	911	361	115	1540	694
No vehicle	1.5	1888	127	281	44	362	258	96	16	353	185
1 vehicle	1.0	6727	435	884	265	1137	700	289	100	1254	540
Percentage of Cessnock LGA Population											
Population		100.0%	5.9%	12.3%	4.3%	16.5%	9.3%	4.1%	2.3%	16.2%	7.1%
Percentage for Locality											
Youth: % of population (aged 10-19)	1.0	15.4%	16.2%	14.9%	16.7%	14.8%	14.8%	13.7%	16.9%	15.2%	17.3%
Seniors: % of population (aged 65 and over)	1.5	12.7%	10.9%	14.5%	10.5%	18.1%	15.0%	10.2%	4.4%	14.1%	12.9%
Tertiary Students: % of population											
- TAFE full time	1.0	0.6%	0.5%	0.7%	0.5%	0.4%	0.8%	0.7%	0.6%	0.8%	0.8%
- University fulltime	1.0	0.5%	0.8%	0.6%	0.5%	0.5%	0.6%	0.7%	0.5%	0.5%	0.4%
% of Labour Force											
Employed fulltime	0.5	58.2%	55.4%	57.9%	64.9%	56.7%	54.7%	61.2%	62.7%	59.6%	57.1%
Seeking fulltime work	1.5	11.1%	14.0%	10.9%	6.3%	10.2%	11.4%	13.5%	6.2%	11.4%	15.2%
% of Trips to Work											
Public Transport	1.5	2.2%	4.1%	1.5%	3.6%	2.0%	2.1%	6.0%	3.4%	1.3%	1.8%
Car driver		75.6%	79.1%	74.7%	73.2%	70.9%	71.8%	75.6%	81.8%	76.9%	76.2%
Car passenger		13.8%	13.1%	16.9%	15.1%	16.6%	15.5%	13.8%	11.2%	14.6%	13.4%
% of Households											
WeekIncome<$700	1.5	54.4%	62.3%	55.3%	40.1%	56.4%	57.3%	54.5%	34.7%	56.8%	60.1%
No vehicle	1.5	12.0%	13.3%	14.0%	6.7%	14.4%	16.2%	14.5%	4.8%	13.0%	16.0%
1 vehicle	1.0	42.7%	45.5%	43.9%	40.4%	45.2%	44.0%	43.7%	30.2%	46.3%	46.8%
Not > one vehicle		54.6%	58.7%	57.9%	47.1%	59.6%	60.2%	58.2%	35.0%	59.3%	62.8%
Public Transport Index											
Population size		52-1239	433	886	259	1239	710	278	112	1201	536
Percentage for locality		171-294	294	278	231	289	290	271	187	282	294

Table 7: Maitland Public Transport Propensity

1996 Community Profiles Relevant to Public Transport: Urban Localities

Profile	PT Index Weight	Maitland LGA	Locality									
			Bolwarra	East Maitland	Maitland City	Metford	Morpeth	Rutherford	Telarah	Tenambit	Thornton	Woodberry
1996 Census Data												
Population		49941	4209	5877	3187	6375	1497	6415	3238	5951	4696	3564
Youth (aged 10-19)	1.0	8166	687	845	423	1192	231	1005	448	919	856	646
Seniors (aged 65 +)	1.5	5217	492	954	635	384	180	601	498	692	189	103
Tertiary Students												
- TAFE full time	1.0	403	28	42	18	55	9	30	22	41	29	29
- University fulltime	1.0	552	63	90	26	73	29	60	16	54	46	35
Labour Force		22645	2063	2604	1289	3039	661	2909	1290	2584	2262	1555
Employed fulltime	0.5	13517	1296	1513	675	1877	413	1741	717	1531	1426	878
Seeking fulltime work	1.5	1925	130	242	251	194	45	265	165	202	97	192
Not in labour force	1.0	14170	1098	2045	1238	1431	456	1880	1164	1813	874	834
Trips to Work		16434	1530	1916	827	2268	504	2105	888	1914	1755	1061
Public Transport	1.5	829	56	118	50	86	21	115	56	96	122	67
Car driver		12764	1260	1445	565	1852	400	1581	641	1496	1398	815
Car passenger		1694	116	196	102	230	36	286	101	215	144	120
Households		17496	1436	2361	1218	2058	554	2284	1243	2191	1474	1103
WeekIncome<$700	1.5	8605	548	1380	828	779	291	1133	776	1150	525	546
No vehicle	1.5	2067	68	458	330	115	67	319	228	237	68	112
1 vehicle	1.0	7132	484	1016	516	828	217	967	598	923	565	514
Percentage of Maitland LGA Population												
Population		100.0%	8.4%	11.8%	6.4%	12.8%	3.0%	12.8%	6.5%	11.9%	9.4%	7.1%
Percentage for Locality												
Youth: % of population (aged 10-19)	1.0	16.4%	16.3%	14.4%	13.3%	18.7%	15.4%	15.7%	13.8%	15.4%	18.2%	18.1%
Seniors: % of population (aged 65 and over)	1.5	10.4%	11.7%	16.2%	19.9%	6.0%	12.0%	9.4%	15.4%	11.6%	4.0%	2.9%
Tertiary Students: % of population												
- TAFE full time	1.0	0.8%	0.7%	0.7%	0.6%	0.9%	0.6%	0.5%	0.7%	0.7%	0.6%	0.8%
- University fulltime	1.0	1.1%	1.5%	1.5%	0.8%	1.1%	1.9%	0.9%	0.5%	0.9%	1.0%	1.0%
% of Labour Force												
Employed fulltime	0.5	59.7%	62.8%	58.1%	52.4%	61.8%	62.5%	59.8%	55.6%	59.2%	63.0%	56.5%
Seeking fulltime work	1.5	8.5%	6.3%	9.3%	19.5%	6.4%	6.8%	9.1%	12.8%	7.8%	4.3%	12.3%
% of Trips to Work												
Public Transport	1.5	5.0%	3.7%	6.2%	6.0%	3.8%	4.2%	5.5%	6.3%	5.0%	7.0%	6.3%
Car driver		77.7%	82.4%	75.4%	68.3%	81.7%	79.4%	75.1%	72.2%	78.2%	79.7%	76.8%
Car passenger		10.3%	7.6%	10.2%	12.3%	10.1%	7.1%	13.6%	11.4%	11.2%	8.2%	11.3%
% of Households												
WeekIncome<$700	1.5	49.2%	38.2%	58.4%	68.0%	37.9%	52.5%	49.6%	62.4%	52.5%	35.6%	49.5%
No vehicle	1.5	11.8%	4.7%	19.4%	27.1%	5.6%	12.1%	14.0%	18.3%	10.8%	4.6%	10.2%
1 vehicle	1.0	40.8%	33.7%	43.0%	42.4%	40.2%	39.2%	42.3%	48.1%	42.1%	38.3%	46.6%
Not > one vehicle		52.6%	38.4%	62.4%	69.5%	45.8%	51.3%	56.3%	66.5%	52.9%	42.9%	56.8%
Public Transport Index												
Population size		187-1063	565	1063	624	771	229	948	574	917	509	445
Percentage for locality		189-334	217	298	334	212	261	259	309	262	198	243

Table 8: Newcastle / Lake Macquarie Public Transport Propensity

1996 Community Profiles Relevant to Public Transport: Selected Urban Localities

Profile	PT Index Weight	Newcastle Urban Centre	Locality													
			Adamstown	Belmont North	Charlestown	Cooks Hill	Edgeworth	Eleebana	Maryland	Mayfield	Merewether Heights	Rankin Park	Throsby	Toronto	Wallsend	Windale
1996 Census Data																
Population		271071	3692	5877	7640	5184	8662	5986	7595	9749	4741	9448	3099	8995	8002	7407
Youth																
(aged 10-19)	1.0	36534	370	1051	1132	514	1347	1060	1160	1065	559	1702	294	1375	1038	1205
Seniors																
(aged 65 +)	1.5	40969	744	495	1118	706	867	493	438	1732	828	756	531	1374	1402	729
Tertiary Students																
- TAFE full time	1.0	1827	35	39	36	59	50	41	31	122	32	52	39	57	47	32
- University fulltime	1.0	7566	56	87	129	395	53	108	111	309	152	249	64	81	185	49
Labour Force		122527	1454	2858	3512	2772	3975	3186	3686	4112	2440	4727	1311	3652	3440	2882
Employed fulltime	0.5	69718	708	1678	1963	1526	2301	1978	2257	2062	1433	2786	645	2023	1932	1455
Seeking fulltime work	1.5	11312	267	216	340	296	335	106	254	710	152	262	244	438	351	433
Not in labour force	1.0	90424	1516	1533	2455	1539	2453	1294	1713	3706	1443	2261	1216	3203	2981	2513
Trips to Work		88458	957	2117	2474	1952	2924	2469	2758	2710	1818	3581	843	2554	2449	1905
Public Transport	1.5	4579	89	62	96	170	81	38	68	252	49	147	78	167	133	109
Car driver		68165	649	1741	2019	1302	2392	2187	2243	1706	1472	2944	507	1919	1875	1473
Car passenger		8046	102	179	231	140	262	176	284	296	172	323	75	264	218	181
Households		103521	1783	1906	2788	2452	2991	1910	2559	4198	1837	2789	1428	3195	3080	2600
WeekIncome<$700	1.5	55689	1241	787	1438	1333	1486	521	1094	2736	764	938	978	1838	1794	1557
No vehicle	1.5	16261	638	115	361	641	326	43	150	1214	142	136	446	442	578	519
1 vehicle	1.0	44746	673	702	1183	1075	1191	517	1130	1974	769	992	625	1419	1354	1136
Percentage of Newcastle Urban Centre Population																
Population		100.0%	1.4%	2.2%	2.8%	1.9%	3.2%	2.2%	2.8%	3.6%	1.7%	3.5%	1.1%	3.3%	3.0%	2.7%
Percentage for Locality																
Youth: % of population																
(aged 10-19)	1.0	13.5%	10.0%	17.9%	14.8%	9.9%	15.6%	17.7%	15.3%	10.9%	11.8%	18.0%	9.5%	15.3%	13.0%	16.3%
Seniors: % of population																
(aged 65 and over)	1.5	15.1%	20.2%	8.4%	14.6%	13.6%	10.0%	8.2%	5.8%	17.8%	17.5%	8.0%	17.1%	15.3%	17.5%	9.8%
Tertiary Students: % of population																
- TAFE full time	1.0	0.7%	0.9%	0.7%	0.5%	1.1%	0.6%	0.7%	0.4%	1.3%	0.7%	0.6%	1.3%	0.6%	0.6%	0.4%
- University fulltime	1.0	2.8%	1.5%	1.5%	1.7%	7.6%	0.6%	1.8%	1.5%	3.2%	3.2%	2.6%	2.1%	0.9%	2.3%	0.7%
% of Labour Force																
Employed fulltime	0.5	56.9%	48.7%	58.7%	55.9%	55.1%	57.9%	62.1%	61.2%	50.1%	58.7%	58.9%	49.2%	55.4%	56.2%	50.5%
Seeking fulltime work	1.5	9.2%	18.4%	7.6%	9.7%	10.7%	8.4%	3.3%	6.9%	17.3%	6.2%	5.5%	18.6%	12.0%	10.2%	15.0%
% of Trips to Work																
Public Transport	1.5	5.2%	9.3%	2.9%	3.9%	8.7%	2.8%	1.5%	2.5%	9.3%	2.7%	4.1%	9.3%	6.5%	5.4%	5.7%
Car driver		77.1%	67.8%	82.2%	81.6%	66.7%	81.8%	88.6%	81.3%	63.0%	81.0%	82.2%	60.1%	75.1%	76.6%	77.3%
Car passenger		9.1%	10.7%	8.5%	9.3%	7.2%	9.0%	7.1%	10.3%	10.9%	9.5%	9.0%	8.9%	10.3%	8.9%	9.5%
% of Households																
WeekIncome<$700	1.5	53.8%	69.6%	41.3%	51.6%	54.4%	49.7%	27.3%	42.8%	65.2%	41.6%	33.6%	68.5%	57.5%	58.2%	59.9%
No vehicle	1.5	15.7%	35.8%	6.0%	12.9%	26.1%	10.9%	2.3%	5.9%	28.9%	7.7%	4.9%	31.2%	13.8%	18.8%	20.0%
1 vehicle	1.0	43.2%	37.7%	36.8%	42.4%	43.8%	39.8%	27.1%	44.2%	47.0%	41.9%	35.6%	43.8%	44.4%	44.0%	43.7%
Not > one vehicle		58.9%	73.5%	42.9%	55.4%	70.0%	50.7%	29.3%	50.0%	75.9%	49.6%	40.4%	75.0%	58.2%	62.7%	63.7%
Public Transport Index																
Population size		53-1962	824	787	1239	977	1211	681	922	1962	744	1143	651	1500	1436	1215
Percentage for locality		177-356	356	224	270	293	245	177	217	334	240	203	342	287	299	298

Table 9: Port Stephens Public Transport Propenstiy

1996 Community Profiles Relevant to Public Transport: Urban Localities

Profile	PT Index Weight	Port Stephens LGA	Locality						
			Anna Bay	Fingal Bay	Medowie-Town	Nelson Bay	Raymond Terrace	Salamander Bay	Tilligerry Peninsula
1996 Census Data									
Population		51288	2445	1392	5294	6755	12332	6552	5316
Youth (aged 10-19)	1.0	7185	358	145	949	698	1885	748	742
Seniors (aged 65 +)	1.5	6954	227	313	186	1843	970	1255	864
Tertiary Students									
- TAFE full time	1.0	264	15	3	21	26	90	27	24
- University fulltime	1.0	412	18	12	63	59	89	41	21
Labour Force		21445	1091	500	2477	2506	5208	2627	1888
Employed fulltime	0.5	12450	553	259	1587	1280	3031	1474	1057
Seeking fulltime work	1.5	1997	132	64	161	274	569	206	224
Not in labour force	1.0	16662	694	584	1086	2996	3350	2487	2111
Trips to Work		14880	742	327	1862	1525	3670	1801	1292
Public Transport	1.5	311	25	12	21	46	65	30	30
Car driver		11546	603	255	1535	1058	2888	1445	1048
Car passenger		1377	70	28	155	170	407	173	111
Households		18507	894	493	1639	2764	4198	2563	2030
WeekIncome<$700	1.5	10014	485	289	498	1802	2163	1482	1227
No vehicle	1.5	1632	52	29	35	383	494	219	171
1 vehicle	1.0	8785	414	289	626	1497	1976	1330	1060
Percentage of Port Stephens LGA Population									
Population		100.0%	4.8%	2.7%	10.3%	13.2%	24.0%	12.8%	10.4%
Percentage for Locality									
Youth: % of population (aged 10-19)	1.0	14.0%	14.6%	10.4%	17.9%	10.3%	15.3%	11.4%	14.0%
Seniors: % of population (aged 65 and over)	1.5	13.6%	9.3%	22.5%	3.5%	27.3%	7.9%	19.2%	16.3%
Tertiary Students: % of population									
- TAFE full time	1.0	0.5%	0.6%	0.2%	0.4%	0.4%	0.7%	0.4%	0.5%
- University fulltime	1.0	0.8%	0.7%	0.9%	1.2%	0.9%	0.7%	0.6%	0.4%
% of Labour Force									
Employed fulltime	0.5	58.1%	50.7%	51.8%	64.1%	51.1%	58.2%	56.1%	56.0%
Seeking fulltime work	1.5	9.3%	12.1%	12.8%	6.5%	10.9%	10.9%	7.8%	11.9%
% of Trips to Work									
Public Transport	1.5	2.1%	3.4%	3.7%	1.1%	3.0%	1.8%	1.7%	2.3%
Car driver		77.6%	81.3%	78.0%	82.4%	69.4%	78.7%	80.2%	81.1%
Car passenger		9.3%	9.4%	8.6%	8.3%	11.1%	11.1%	9.6%	8.6%
% of Households									
WeekIncome<$700	1.5	54.1%	54.3%	58.6%	30.4%	65.2%	51.5%	57.8%	60.4%
No vehicle	1.5	8.8%	5.8%	5.9%	2.1%	13.9%	11.8%	8.5%	8.4%
1 vehicle	1.0	47.5%	46.3%	58.6%	38.2%	54.2%	47.1%	51.9%	52.2%
Not > one vehicle		56.3%	52.1%	64.5%	40.3%	68.0%	58.8%	60.4%	60.6%
Public Transport Index									
Population size		29-1711	356	252	559	1380	1711	1146	939
Percentage for locality		143-326	252	301	183	323	255	284	296

2.6 Social Surveys

• Maitland

Maitland City Council Social Plan July 2000 identifies a number of issues under the topic of Transport Services.

These issues relate mainly to specialised transport services for the disabled, children and carers. However the need for appropriate and affordable transport, particularly in isolated areas, for people of all ages was identified as an issue that needs to be addressed.

• Newcastle

Some indicators of travel habits emerge from surveys undertaken in September 1999 by the Hunter Valley Research Foundation as part of Newcastle City Council's Social Plan (see Table 10).

Participants were asked to indicate what proportion of their travel was made using public transport. The responses to this question are summarised below, together with their conversion into an overall score. The scale on this score runs from 1 (Total Use) to 6 (Never), with a value of 3 indicating that about half of all trips are made using public transport.

Table 10: Use of Public Transport in Newcastle LGA

Proportion of trips made using Public Transport	Total	Hamilton	Inner City	Jesmond	Lambton	Industrial	North West	South	Wallsend
All the time	8%	12%	9%	9%	5%	13%	8%	2%	4%
Most of the time (three quarters)	8%	10%	4%	12%	6%	16%	9%	2%	4%
About half the time	4%	3%	25%	7%	6%	5%	2%	6%	3%
Sometimes (a quarter)	12%	9%	13%	9%	16%	14%	14%	10%	10%
Not very often	43%	38%	51%	38%	42%	38%	42%	47%	41%
Never	26%	28%	20%	24%	23%	14%	25%	34%	39%
Don't know / No response	0%		1%	0%	1%	0%			
Mean Score	4.5	4.4	4.6	4.3	4.5	3.9	4.5	5.0	5.0
Key: 3 = about half 4 = sometimes 5 = not very often									

Proportion of trips made using Public Transport	Total	Age						Gender	
		16-19	20-24	25-34	35-49	50-64	65 & over	Male	Female
All the time	8%	22%	12%	8%	3%	4%	8%	6%	9%
Most of the time (three quarters)	8%	20%	15%	6%	2%	6%	9%	7%	8%
About half the time	4%	13%	7%	1%	2%	3%	5%	3%	5%
Sometimes (a quarter)	12%	22%	9%	10%	11%	11%	14%	12%	12%
Not very often	43%	16%	44%	46%	45%	49%	39%	43%	42%
Never	26%	7%	12%	29%	36%	28%	23%	28%	24%
Don't know / No response	0%		1%	1%	0%	0%		0%	1%
Mean Score	4.5	3.1	4.0	4.7	5.0	4.8	4.4	4.6	4.4
Key: 3 = about half 4 = sometimes 5 = not very often									

Key observations from these summaries include:

- With the exception of the 16-19 year age group, people in all other age groups and districts are not high users of public transport, with an overall average of a quarter of all trips being the standard
- The South and Wallsend districts and the 35-49 year age group are the lowest level users of public transport, with their overall average being a response of 'Not Very Often'.

A marginal difference only was noticed between the usage of public transport by males and females, with males being slightly lower level users relative to females.

• Port Stephens

Port Stephens Council conducted Community Surveys in 1998 and 2002. The Surveys produced some significant indicators regarding use of and attitudes towards public transport. The information was gained from responses to the Survey Questionnaire.

In the 1998 Survey:

- In 50% of households, at least one member had travelled by local bus in the last year (excluding school bus and community transport)
- People expressed most concern about:
  - ◊ transport for young people in the evenings
  - ◊ lack of shelter and seating at bus stops
  - ◊ safety
  - ◊ expense
  - ◊ long waits for buses.

In response to the question about what people disliked about the area where they lived, in six of the eight Planning Districts, between 10% and 22% of people quoted 'lack of transport and distance from Newcastle'.

Overall, transport issues were ranked second in importance behind medical and health services. Transport was ranked more highly by those in the younger and older age groups.

In the 2002 Survey:

- 27% of respondents considered that public transport links had improved in recent years, and 57% considered they had remained the same. However, the responses varied greatly in some areas.
  - ◊ In Fern Bay, Medowie and Tilligerry, 28-35% (twice the total rate) considered public transport links had worsened
  - ◊ In Nelson Bay, only 3% (one fifth of the total rate) considered public transport links had worsened
  - ◊ These responses could be directly related to changes in service patterns by different private operators in recent times.
- Among the things in the neighbourhood that people disliked most, public transport was ranked near the top in Medowie, Tilligerry, Raymond Terrace and Western Rural.
- The areas with the highest stated level of car usage were the same as the areas with the highest dissatisfaction with public transport services.
- In all areas, bus was the most commonly used means of transport other than the private car
  - ◊ 26% of people made trips by bicycle. In Nelson Bay it was over 38%.

- 44% of people said they would use other types of transport if there were improved public transport routes, links and timetables.
  - ◊ In Medowie and Tilligerry, this percentage was at least 62%
  - ◊ 43% of people said that they would not consider changing their present means of transport
  - ◊ Relative to other areas, Raymond Terrace showed the lowest level of support for improved public transport services and also the highest level for reluctance to change travel modes.
- Provision of footpaths was nominated as the most significant factor in encouraging people to walk more often, particularly in urban areas.
- 67% of workers work in Port Stephens, 24% work in Newcastle, 4% in Maitland, and 5% elsewhere
  - ◊ These survey results provide a reasonable match to the travel data in Table 3 after taking into account the travel categorised as 'other'.

3 Public Transport Services in the Lower Hunter

The Lower Hunter Region is the only non-metropolitan region in Australia which has retained all the main modes of public transport: train, bus and ferry. It has a multitude of operators. This may cause some problems for integration in the short term, but it means that the region is not saddled with the operating practices and attitudes of one or two operators such as has happened in some of the recent privatisation regimes.

The Lower Hunter Region has a solid public transport foundation to build on. It would be a pity not to capitalise on this advantage and become the regional leader in Australia for integrated sustainable transportation.

3.1 Trains

The regional and intercity trains are operated by CityRail. There is a local management team in Newcastle, but the policy-making roles are based in Sydney.

There are two regional rail services:

- Hunter Lines: Newcastle - Maitland (Telarah), with extensions to Dungog and Scone, operated by a fleet of 11 diesel rail car sets
- Central Coast Line: Newcastle - Lake Macquarie, extending as far as Morisset, operated by four 2-car double-deck electric train sets.

The Maitland trains operate each half hour on weekdays and hourly at night and at weekends. In addition, there are:

- 5 return trips to Dungog on weekdays and 3 at weekends
- 3 return trips to Scone plus an extra trip to Muswellbrook on weekdays, and 2 return trips to Scone at weekends.

The Morisset trains provide 8 return trips during shopping hours on weekdays. At other times, the minor stations between Newcastle and Morisset receive a train service every 2 hours.

A bus service operates between Toronto and Fassifern in place of the former train service which was discontinued in 1990. Train tickets are used for travel on the bus, and the bus timetables are coordinated with the normal train times at Fassifern for travel to both Newcastle and Sydney. However, there is no timetable coordination when the train times are altered for trackwork.

Intercity trains operate between Newcastle and Sydney using 4, 6 and 8-car double-deck electric trains.

- Services operate hourly seven days a week, with higher frequencies during weekday peak hours
- One trip each hour on weekdays, and one trip every two hours at weekends, operate to an express timetable. Other trips stop at all stations between Newcastle and Wyong.
- The express train trip from Newcastle to Sydney takes 2 hours 32 minutes, the other trips take 2 hours 42 minutes
- The fastest peak hour train from Newcastle to Sydney with 8 stops take 2 hours 21 minutes

By comparison, in 1938, the morning peak hour express train from Newcastle to Sydney took 2 hours 26 minutes on weekdays (4 stops) and 2 hours 21 minutes on Saturdays (non-stop)[14].

[14] *Country Timetable 1938* Dept of Railways; *Trains to Newcastle and Short North* Charles Covell, ARHS Bulletin, October 2000, p 369; *The Newcastle Express* Bob Ritchie, The Times (AATTC), November 1998, p 3

Country trains are operated by CountryLink.

- They run from Sydney through Broadmeadow to Moree, Armidale, Grafton, Brisbane and Murwillumbah
- There is one train to each destination each day
- CountryLink trains stop in the Lower Hunter at Fassifern, Broadmeadow and Maitland.

Coach services connect with country trains at Broadmeadow for services to Forster and Taree through Raymond Terrace.

Train and bus timetables are not usually coordinated, so that train travel is generally only an option for those who can walk or drive to the station.

There are two rail tracks (one for each direction) south from Newcastle, and north from Newcastle to Telarah and most of the way to Muswellbrook. Between Waratah and Maitland, there are two additional tracks used predominantly by coal trains. Some sections of double track are signalled for bi-directional operation.

Freight trains operate over the same rail tracks as passenger trains. When trackwork is undertaken, CountryLink and freight trains continue to operate (but with delays). Regional passenger trains are replaced by buses, officially adding up to 50 minutes to the normal trip time. When there is trackwork on the coal lines between Waratah and Maitland, coal trains use the passenger lines and CityRail passenger trains are replaced by buses.

3.2 Buses

The dominant bus operator in the area is Newcastle Bus and Ferry Services, a unit of government-owned State Transit.

- State Transit has 2 depots (Hamilton and Belmont), a fleet of 179 buses, of which 163 are used in the peak period.
- There are 29 different routes covering Newcastle / Lake Macquarie from the Hunter River to Caves Beach, and westward to Boolaroo, Wallsend and Sandgate. Three of these routes provide limited trips for special purposes.
- The main routes receive a half-hourly service in peak hours and hourly at other times. Some trunk routes have higher frequencies. Other routes receive a basic hourly frequency which is disturbed during school peak times.
- 9 of the normal routes do not operate on Sundays, 11 do not operate at night time.

There are a total of eight private bus companies which provide route bus services in the Lower Hunter (including school services). A large number of private bus companies provide school services only.

- Six of these private bus companies provide urban bus services:
  - ◊ in the western suburbs of Newcastle and Lake Macquarie
  - ◊ within Cessnock
  - ◊ within Maitland
  - ◊ within Raymond Terrace
  - ◊ throughout the Tomaree Peninsula.
- Five of these private bus companies provide inter-town services between:
  - ◊ Newcastle and Medowie, Lemon Tree Passage and Tomaree Peninsula (2 operators)
  - ◊ Raymond Terrace, Medowie and Lemon Tree Passage (1 operator)
  - ◊ Newcastle and Raymond Terrace (2 operators)
  - ◊ Newcastle, Maitland and Cessnock (1 operator)
  - ◊ Swansea and Wyong (1 operator).

- Generally private buses operate hourly on weekdays, with limited services at nights and weekends.

Some inter-city bus services are timetabled to co-ordinate with trains at Fassifern, Newcastle and Maitland stations, but there is no guarantee that the coordination will occur for any particular trip.

3.3 Coaches

Long distance coach services are provided between:

- ◊ Taree and Newcastle (connecting with trains at Broadmeadow)
- ◊ Forster, Newcastle and Sydney
- ◊ Bulahdelah and Newcastle
- ◊ Port Stephens, Newcastle and Sydney
- ◊ Newcastle and Dubbo
- ◊ Sydney, Newcastle and Brisbane via New England Hwy
- ◊ Sydney, Newcastle and Brisbane via Pacific Hwy.

- These coach services generally stop only at a few locations. Prior reservation is usually necessary for travel.
- Most coach services stop at the Newcastle Station Interchange. Some also stop at the coach stop in Smart St Charlestown and outside Broadmeadow Station. There are no other designated coach stops, although some coach operators make their own arrangements about stopping places.

Several attempts in recent years to establish commuter coach services between Newcastle and Sydney have not been successful.

3.4 Ferries

State Transit owns two ferries which were 1988 Bicentennial gifts from the Federal Government to the city.

- The ferries are used solely for the 5-minute trip across the Hunter River on the Newcastle - Stockton service.
- The service operates every half an hour every day and night, with a 20 minute frequency during weekday peak periods.
- Only one ferry is in service at any one time.

Port Stephens Ferry Services provides three return ferry trips every day between Nelson Bay and Tea Gardens.

3.5 Coordination

Some local bus companies make reasonable attempts to coordinate their services with trains:

- Cessnock - Maitland buses connect with Maitland - Newcastle trains
- Port Stephens - Newcastle buses connect with Newcastle - Sydney trains.

But this is a one-sided exercise. There is no effective mechanism to communicate with the bus driver if the train is late, or to maintain connections when train services are disrupted during track work. Even the CityRail funded Toronto - Fassifern TrainBus is not altered to maintain connections with amended trackwork timetables. It is not uncommon for train journeys between Lower Hunter stations and Sydney to take up to two hours longer due to poor connections and amended timetables when trackwork is undertaken.

There seems to be little appreciation of the adverse impact that rail trackwork has on public transport patronage. The replacement buses, or the trains operating on amended timetables, are not able to maintain connections with feeder buses. There is an increasing tendency in recent times for track work disruptions to occur on weekdays as well as at night-time and at weekends.

Surveys undertaken at Warabrook Station have shown that when buses replace trains during trackwork, patronage drops considerably. In one survey on a Tuesday in 1999, the normal train patronage fell from 301 to 73 during the period when trains were replaced by buses[15].

In a sustainable transport system this cannot be allowed to happen, and all components of the transport system have to keep operating to the agreed schedules. Other mechanisms for track maintenance have to be found, as is done successfully on the high-frequency rail networks in Europe.

3.6 Community Transport

- There are community transport groups in Newcastle, Lake Macquarie, Port Stephens, Maitland and Cessnock providing transport for people who meet funding eligibility criteria based on need and disability. These services are managed through a coordinator. They provide door-to-door transport for specific purposes subject to vehicle availability.
- While very helpful to those deemed eligible, community transport does not meet the transport needs of the majority of frail and aged who have difficulty coping with normal public transport services.
- State government funding has been obtained for a weekly community transport service between Lemon Tree Passage and Nelson Bay.
- Several aged persons homes have their own minibuses which are used for transporting their residents and visitors on group activities.

3.7 Other Public Transport

Newcastle Taxi Services Cooperative has a fleet of 158 taxis covering Newcastle, Lake Macquarie and Williamtown areas. It also has a number of special purpose taxis designed to cater for the needs of disabled persons.

Separate taxi fleets operate in Tomaree Peninsula, Maitland / Raymond Terrace, Kurri Kurri and Cessnock.

A water taxi operates on Lake Macquarie, with capacity for up to 12 people per trip.

Hire cars meet some specialist public transport needs, but tend to concentrate on transport for special occasions

A number of companies provide door-to-door transport for travel to airports and shipping terminals.

[15] *Traffic and Public Transport Surveys August 1999,* The University of Newcastle, Sept 1999, p 24

4 Transport Initiatives in the Lower Hunter

4.1 Local Councils

Each Council in the Lower Hunter Region has adopted its own vision for the future directions of its local government area. The development strategies are based on the principles of urban sustainability. There are several underlying themes which are included in each of these strategies, including:

- adoption of sustainable growth policies
- containment and consolidation of urban areas
- reduction of travel demands
- enhancement of opportunities for greater use of sustainable transport modes.

The five Councils in the Lower Hunter Region recognise that sustainable transport has to be planned and operated independently of council boundaries.

4.1.1 Cessnock

In the Cessnock CBD Planning Study, both the Council and the RTA have identified the need for a Pedestrian Access and Mobility Plan. Traffic through the CBD (Vincent Street in particular) is not likely to decrease in the near future. However, the need for pedestrians to cross the main street has to be considered, and the current spacing of traffic signals 400-500m apart may not be adequate for this purpose.

The RTA has also indicated that there needs to be increased facilities within the CBD for non-car based travel. Facilities should be provided to ensure that the CBD is accessible to all patrons. Such facilities would include a bus interchange area, secure parking for bicycles, and incentives to encourage people not to drive to the CBD.

There may be an opportunity to expand the Council's Section 94 Contributions Plan for the Cessnock CBD to include funding for non-car facilities.

In March 2002 Cessnock City Council exhibited a draft Pedestrian Access and Mobility Plan for the Cessnock and Kurri Kurri town centres. The plan aims to provide pedestrians with safe and accessible facilities to encourage walking, and to ensure that future initiatives continue to be relevant to the community's needs.

4.1.2 Lake Macquarie

As part of its Lifestyle 2020 Plan, Lake Macquarie City Council arranged for the preparation of an Integrated Transport Strategy, which has now been adopted as a Council project to support its vision for transport:

> *To provide an efficient, environmentally and socially sustainable transportation system to meet the current and future needs of all sectors of the community*

The principal objectives of the Council relating to this vision include:

- develop a long term integrated transport scheme that serves residential, commercial, tourist and recreational activities in the future and encourages beneficial growth in the City;
- improve the accessibility and transport choice for residents and workers in the City;
- work towards a public transport system that features low fares, quick service and good design;
- ensure passengers feel safe and experience few obstacles when using public transport;

- integrate all aspects of transport so the services provided are equitable and environmentally responsible;
- contribute to a land use plan that reduces the reliance on private transport in the community and offers more choice to travellers;
- consider the employment areas, both current and future, and address access problems that may be experienced by employees and industrial uses; and
- minimise transport conflicts between industrial areas and their neighbours, especially in regard to heavy vehicles.

The Council proposed key actions in three strategic areas:

- land use and transport integration
- sustainable transport systems
- management of growth.

Many of the initiatives raised in the Council's Strategy Report are covered in this Issues Paper.

In May 2002, Lake Macquarie City Council resolved to establish a Regional Transport Forum which would focus on development of an integrated transport system that would encourage maximum use of public transport. Invitations have been sent out to prospective members of the Forum, but as yet the Forum hasn't been established.

4.1.3 Maitland

Maitland City Council adopted the Maitland Integrated Transport Study in 1995. The study identified issues relating primarily to local transport. Issues of integration with transport systems in other areas were not covered.

Maitland City Council adopted an Urban Settlement Strategy 2001-2020, which is an outcome from the Council's Long Term Vision Statement. The Strategic Context for the Strategy includes a statement that:

> *Forecast population growth as well as changes in technology and transportation are expected to lead to an increasing role for Maitland as part of the greater metropolitan region of Sydney, Newcastle and Illawarra. The City's relative capacity for growth within this metropolitan region is also expected to bring strategic opportunities for the future.*

The Strategy also includes the following objectives:

- ensure that any proposed new urban areas are serviced by either bus and/or rail public transport
- ensure that the design of urban neighbourhoods facilitates the use of public transport and encourages walking and cycling in safety
- smaller residential lots and higher density housing should be located close to neighbourhood centres and public transport stops.

The Strategy envisages that the major growth corridors will be located to the north of Thornton, at Gillieston Heights, at Aberglasslyn, and possibly also at Bolwarra and West Rutherford.

The Strategy predicts that the City's population will grow from its 1996 level of 50 000 to over 71 000 by 2021, using medium growth forecasts.

The Transportation section of the Strategy outlines the difficulties of applying sustainable urban design objectives for passenger travel when the main rail corridor through the City is also a major freight artery, carrying the largest volume of rail freight on any regional rail line in Australia.

4.1.4 Newcastle

In 1998, Newcastle City Council adopted the Newcastle Urban Strategy, based on the principles of urban sustainability. It embraced 'Newcastle Urbanism':

> *a name given to the process of applying transit supportive new urbanist principles to the urban structure of Newcastle in order to offer greater choices to all members of the community, in terms of access to housing, employment, transport, and social and cultural services, while offering reduced travel demand, improved air quality and greater identity for Newcastle, its City Centre, and its district and neighbourhood centres.*

Features of this Urban Strategy include:

- ◊ changes in economic and employment trends
- ◊ recognition of the costs of fringe development
- ◊ greater variety in housing stock to meet varied household patterns
- ◊ reduced travel demand, leading to reduced traffic congestion
- ◊ reduced air pollution from travel activities
- ◊ sustainable urban settlement design
- ◊ walkable neighbourhoods
- ◊ interconnected streets
- ◊ greater use of public transport
- ◊ better balance between housing and employment
- ◊ reduced car parking demand
- ◊ pedestrian amenity and efficiency.

Principle number 7 of the Newcastle Urban Strategy states:

> *Help to accommodate public transport, walking and cycling as alternatives to the car as well as accommodating the need to move goods around the city and region for commerce and industry by road and rail.*

The Council has resolved to implement measures to encourage and facilitate small businesses and home-based businesses across Newcastle on the basis that an increase in work done from home may put less demand on transport systems. The major industrial areas, the Port of Newcastle, the University, and John Hunter Hospital are identified as major employment centres that need better transport links with each other and with the regional and district centres.

Social and economic equity are important to the urban strategy. Therefore public transport is a socially and economically equitable solution as well as being environmentally sustainable.

In September 1999, Newcastle City Councillors produced a **Vision for the Future** for Newcastle**.**

> *In 2010 the City of Newcastle will be a vibrant cohesive and committed community which respects its heritage. It will have an equitable distribution of resources and above average employment levels where youth have a future.*
>
> *It will be an attractive and well planned garden city, with a healthy lifestyle and ecologically sustainable development.*
>
> *In 2010 the City will be promoted and recognised as a regional centre for value adding business and advanced technology, health, education, culture, tourism and conventions.*
>
> *It will be realistic and responsible in its use of resources and will be both financially sound and entrepreneurial in its changing environment.*
>
> *Newcastle will be an exciting city in which to work, do business and visit. It will be a GREAT PLACE with a GREAT LIFESTYLE and a GREAT FUTURE.*

There are several objectives and strategies that have been identified to achieve this vision in the short term. Those relevant to activating public transport are listed here.

1. *To maintain and develop **sustainable infrastructure assets** that are relevant and equitable for community needs*

2. *To achieve a **clean, green and sustainable city** which promotes innovation and creativity*
   - *Develop partnerships with third parties to enlist their involvement*

3. *To create a positive environment that leads to at least a 2% **increase in employment** (or 1500 jobs)*
   - *Maximise State and Federal grant opportunities*
   - *Investigate and develop an alliance with the Newcastle and Hunter Business Chamber*

5. *To facilitate the development of a **diverse and sustainable tourism industry***
   - *Lobby for improved transport links (faster trains)*

6. *To increase opportunities for everyone to pursue **a satisfying and socially responsible lifestyle***
   - *Define Council responsibilities for direct services and advocate for others*

7. *To fulfil obligations for **Ecologically Sustainable Development** as required by the Local Government Act*
   - *Apply ESD principles to Policy Development*

8. *To facilitate **delivery of social and community services** according to priorities in the Social Plan*
   - *Implement the Social Plan*

To achieve these objectives and implement these strategies, Council will seek the involvement of the community, business groups and Government.

In 1995 Newcastle Council adopted its Newcastle Environmental Management Plan. It set out 228 actions and strategies concerning environmental issues, the majority of which were successfully completed. The Plan is currently being reviewed, and will include a topic on transport systems and urban form.

In May 2002, Newcastle Council issued its Pedestrian Access and Mobility Plan (PAMP) for public comment. An important function of the PAMP is to identify pedestrian needs and clearly indicate, to both Council and the community, Council's direction with respect to the management of pedestrian needs and to the improvement of the pedestrian environment.

In October 2002, Newcastle Council completed its Sustainable Community Indicators Project. This includes indicators on appropriate transport networks. The Report Card shows that in recent times:

- community satisfaction with public transport is static
- community satisfaction with cycleways is improving slightly.

Data is not available to study trends in per capita use of public transport.

Future targets are:

- to reduce vehicle kilometres travelled (vkt) per capita
- to increase the proportion of trips undertaken by public transport, walking and cycling
- to increase the density of population and employment in designated urban villages.

4.1.5 Port Stephens

The Council's 30 Year Plan contains Aims and Directions that are directly relevant to sustainable transport.

- Ensure the growth in residential development is accompanied by adequate growth in public infrastructure and community services and facilities
- Encourage the development of a public transport system that takes advantage of the built and planned road networks
- Facilitate accessibility of all residents and visitors to public transport carriers, including the construction and maintenance of facilities that will meet the needs and expectations of the community.

Port Stephens Council has had an Urban Settlement Strategy for over ten years. It is being progressively updated through workshops, seminars, guidelines and principles.

The Urban Settlement Principles suggest, among other things, that:

- towns and villages should provide good urban amenity, including
  - ◊ opportunities to increase public transport options, and to promote walking and cycling
- a regular public transport system is needed to provide realistic alternatives to private motor vehicles within and between villages, and this should be explored
- neighbourhood and street structure should support safe pedestrian and cycle access
- improved opportunities for walking and cycling are essential.

Given the community values contained in the 30 Year Plan, the challenge for the Council is to develop a settlement pattern that reflects the community's desired sustainable future. The Council has determined that the most sustainable approach is to pursue a settlement pattern with a cluster of six or seven neighbourhoods around a central town centre.

In its examination of the future direction of the Urban Settlement Strategy, the Council has identified the need to establish alternative transport modes, such as regular public transport and cycleways, in Northern Raymond Terrace, Tomaree Peninsula, Tilligerry Peninsula, Medowie, Fern Bay and Karuah.

4.2 Cities for Climate Protection

Lake Macquarie, Newcastle and Port Stephens Councils are participants in the Cities for Climate Protection (CCP) program, which is managed in Australia by the Australian Greenhouse Office. Cessnock Council has recently decided to join the group.

CCP began in 1993. It is a global campaign to reduce emissions that cause global warming and air pollution. In Australia 146 councils are participants, representing 60% of the country's population. In NSW, 47 councils are participants, covering 56% of the state's population[16].

Participants are provided with program material, and they work through a 5-step milestone process. Newcastle has achieved Milestone 4, Port Stephens Milestone 3, and Lake Macquarie Milestone 1. Milestone 4 represents the implementation of the council strategy for emission reductions.

CCP has a Travel Demand Management Assistance Package for Local Government members. It is a component of the national Commonwealth funded Travel Demand Management program[17].

[16] Information obtained from website <www.iclei.org>

[17] Address by Joey Tabone, Australian Greenhouse Office, at *Travel Demand Management - The Smart Alternative* Seminar, Sydney September 2002

The Package assists local governments to establish and implement comprehensive local travel demand management strategies. These strategies influence travel behaviour and/or travel decisions within the community, including organisations that as a consequence of their business generate a large number of trips.

The Package provides resources and technical guidance to promote travel demand management projects. It documents existing and new travel demand activities by local government. It focuses on low-cost, non-built and information based behaviour change, and it responds to broader travel-related problems.

The Action Strategies for the Lower Hunter suggested in this Issues Paper (Vol 1, §4) would be eligible for funding under this Assistance Package.

4.3 University of Newcastle

In Newcastle, bus routes have been designed to focus on Newcastle CBD, and to some extent on Charlestown. The University campus is a major regional facility, attracting similar numbers of people each day as the CBD and greater numbers than Charlestown. The level of public transport usage to the University is higher (at around 10%) than for the CBD or Charlestown, but there are about 3 times less services.

Since 1996 the University of Newcastle has pursued an environmental management policy at its Callaghan Campus which encourages greater use of public transport, cycling and walking as access transport modes. It has restricted the growth in car parking spaces, and facilitated use of alternative modes of transport.

It has spent over $2m on providing the best bus interchange in the region. This ensures that all university bus services pass through the campus at all times. It was successful in convincing the State Government to build the new University (Warabrook) railway station in 1995, which is now used by up to 1800 passengers a day. It has the highest patronage of any of the suburban stations in the Newcastle rail network (more than Maitland and Cardiff), and ranks fifth behind Newcastle, Hamilton, Broadmeadow and Morisset (see Vol 2, § 2.4).

The University also operates its own internal shuttle bus between 4.30pm and 10.30pm on weekdays, linking the campus buildings with the bus terminals, railway station, residential colleges and car parks.

In the Newcastle Buses Bus Plan introduced in March 2002:

- the previous peak-hour only bus routes were converted to full time routes. Patronage on buses from the University increased by 46% in the second week of operation
- The frequency of services on the trunk corridor to Charlestown was doubled, and connections were provided with all the routes serving areas south of Charlestown. There was an immediate increase in patronage of 3% in the Charlestown corridor[18].

The University publishes an annual Transport Guide which lists all the bus and train timetables for access to the Callaghan Campus from every locality in the Lower Hunter. The 2003 Guide is a 140 page full-colour booklet with a multi-colour map insert showing all bus and train routes in the Newcastle / Lake Macquarie area. The Guide shows connecting services between buses, irrespective of operator, and between buses and trains. The Guide also shows how to use the local roads and cycleways to cycle to the campus from a 30-minute radius.

[18] *University of Newcastle Travel Modes Survey March 2002*, Transit Planners, June 2002

This Guide has been an invaluable instrument in not only drawing attention to the range of public transport services that are available but also in providing integrated information on all the services available in one compact format. The Guide is distributed with the enrolment applications for new students to assist families in determining residential accommodation locations during university semesters.

Annual surveys have shown that the modal split for public transport (bus and train) since 1996 has been as high as 17% in the peak hour and 13% for the whole day[19], around three times greater than for the rest of the Newcastle / Lake Macquarie area.

However, the reliability of public transport is tarnished by the delays to buses caused by traffic congestion on the approach roads during the morning peak hour. It is not uncommon for commuters to miss the start of lectures due to late-running buses.

4.4 Transport Advocacy Groups

At a meeting held at the Newcastle offices of the then Dept of Urban Affairs and Planning in November 1999, strategy planners from councils in the Lower Hunter initiated efforts to develop strategies for public transport improvements based on the needs of the region rather than individual local government areas. These planners are now members of the Lower Hunter Public Transport Liaison Group which commissioned this Issues Paper.

In December 2001, Planning NSW established a Regional Coordination Management Group Transport Issues Subcommittee to address transport issues at a regional level in the Hunter. The Group has considered funding options for a Transport Development Worker in the Hunter Region. It has also resolved to engage local councils to add strength to efforts at the local level and to promote wider ownership of regional initiatives on transport issues. Local government representation on the Group is provided through Hunter Councils (formerly HROC).

At about the same time, the Hunter Planners Network (representing the Royal Australian Planning Institute in the Hunter) prepared a study proposal and presented it to the Regional Solutions Program for funding to undertake an Integrated Transport Planning Project for the Hunter Region[20].

Hunter Councils has set up a Task Force to prepare a regional transport strategy. It is concerned with road and freight issues and has so far liaised with the RTA.

The RTA has Regional Development Committees which consider the transport implications of major developments. Public transport providers generally do not avail themselves of the opportunities to participate in the committee deliberations.

The RTA also manages the Regional Freight Group which meets regularly with representatives from the road transport industry and local councils to consider operational issues related to road freight.

The Hunter Business Chamber has a Regional Infrastructure Committee which takes an active interest in transport issues. It has produced several significant reports and submissions, including light rail transport systems, regional integrated transport systems, and regional planning and management of transport services.

In April 2003, the Minister for Transport Services (and Minister for the Hunter) announced the formation of the Newcastle Woodville Junction Working Group which will be supported by the Premier's Department to deliver a plan for an integrated transport system for the Lower Hunter. Its terms of reference are to:

- assess present routes and patronage of rail and bus services in the Lower Hunter

[19] *University of Newcastle Travel Modes Survey Semester 1, 2003*, Transit Planners, June 2003

[20] *Integrated Transport Planning Project: An Outline of a Process to Achieve Regional Transport Integration for the Hunter and Hinterland Regions* Project Description prepared by the Hunter Planners Network, Nov 2001

- review proposals for improvement of transport services, including Woodville Junction proposal
- investigate replacing the rail line to Newcastle with a 'dedicated transport corridor' for a 'superior frequent bus service'
- consider funding options, including private sector investment from residential and commercial developments, while preserving all heritage sites including Newcastle station.[21]

Advancing Lake Macquarie is an advocacy group sanctioned by Lake Macquarie City Council. It has a Transport Task Force which pursues regional issues of strategic importance. In July 2002 it made a presentation to all Lower Hunter State and Federal Members of Parliament on the need for a fully integrated regional transport interchange at Glendale, and it has recently prepared a Lower Hunter Transport Proposal for presentation to the Newcastle Woodville Junction Working Group.

The Hunter Commuter Council undertakes a monitoring role on the operations of the region's trains, buses, ferries and taxis. It meets every two months and receives reports from the various transport operators and agencies. Its members have questioned its effectiveness in relation to most transport management decisions which are now made in Sydney.

The Newcastle Lord Mayor set up a Transport Reference Group in 2000 to examine issues associated with the inner city rail corridor. It has pursued the concept of a multi-modal transport interchange at Woodville Junction, west of Hamilton Station.

The Newcastle Cycleways Movement was established in 1977 to promote cycling as a mode of transport within the community and the development of cycleways and safe cycle routes.

The Lower Hunter Region lacks a Community Forum that can assess and respond to regional transport issues on behalf of the community. Although ad-hoc groups have arisen in response to particular issues, there is no regional perspective in which they can address their concerns.

4.5 Recent Reports

4.5.1 References

The concepts that are being used to stimulate sustainable transport strategies in the Lower Hunter are in accord with the adopted principles and findings in a variety of recent reports and submissions addressing local land use planning and transport issues, as well as research and policy reports on achieving sustainability in transportation.

Lists of these reports are included in Vol 2, §7.

The strategic thinking that emerges from these sources can be summarised in this way.

- Travel demand management strategies are essential if the road network is going to be able to cope in the future and if air quality is going to be maintained and improved
- These strategies include reducing the need for people to travel as often and as far as they do now, and increasing the use of public transport, cycling and walking
- Some members of the community advocate better public transport, and would be prepared to use it for some of their trips if it is sufficiently attractive
- Convenience is the key factor in making public transport more attractive. This entails more frequent services to a wider choice of destinations, faster travel times, personal safety, reasonable levels of comfort, and easily understood and accessible transport systems
- Projects have been successfully implemented in other regions similar to the Lower Hunter where people's travel behaviour has changed to more sustainable travel modes

[21] *Costa maps transport needs* Newcastle Herald, 11 April 2003

- Opportunities for the use of innovative transport schemes and new technology to meet the needs of the Lower Hunter need to be explored.

The priority issues that have been identified in these sources for improving mobility in the community are:

◊ Accessibility
◊ Affordability
◊ Safety
◊ Coordination.

4.5.2 Activating Public Transport

From June to August 2001, Newcastle City Council exhibited the precursor to this Issues Paper *Activating Public Transport in the Newcastle Region.* Seven submissions were received, all supporting the thrust of improved public transport. 3 of the submissions were from individuals, 4 were from the government agencies most directly involved with transport improvements: State Rail, State Transit, Roads and Traffic Authority, and Environment Protection Authority.

The main points raised in these submissions are summarised below.

- **Individuals**

  - Advantage should be taken of the recreation and events destinations in the corridor between Broadmeadow and Inner City. High-volume public transport systems, such as light rail, would be ideal for moving the large numbers of people, especially with a natural transport hub at Broadmeadow.
  - A City-loop bus service would provide a better service and less disruption than the current movement of mostly empty buses in Newcastle East.
  - A City Link bus service could link The Junction, Darby Street and Marketown shopping centres with the CBD and foreshore
  - There should be a ferry service, using existing vessels, between Throsby Basin and the City Centre.

- **Roads and Traffic Authority**

  - The principles outlined in the original Issues Paper are generally concurred with.
  - Transport solutions should be tailor made to meet the strategic needs of the Hunter Region.
  - Efficient and effective public transport is a key element in the provision of a sustainable transport network
  - While Councils are not public transport service providers, their decisions have significant influence.

    ◊ Land use patterns and density influence the extent and form of personal transportation. Council can promote development patterns which make public transport less expensive, less circuitous, more efficient and convenient, and thus more attractive to potential users.
    ◊ Land release development should be coordinated across Council boundaries to minimise the need for vehicular travel by avoiding simultaneous land releases that are sparsely located.
    ◊ Parking policies in the vicinity of major attractors (such as Newcastle CBD) influence individual transport decisions. For example, such policies could selectively penalise commuter trips (and not shopping trips) by applying a high parking fee for vehicles staying for longer than a six hour period.
    ◊ Council's policies (and that of other government agencies) which provide free and subsidised parking for employees, along with generous Council vehicle salary packages, should be revised as a positive first step to send a message to the community.

- All relevant government bodies should review the provision of free and subsidised car parking and car provision for all employees, and invest the funds into incentive schemes for employees to use public transport.
- All government agencies, including Councils, must lead by example to reduce total vehicle kilometres travelled and vehicle emissions. Generally, public transport is seen as a transport option for people other than government employees and managers, but in fact these people must lead the way.
- Car pooling of government vehicles should be encouraged between government bodies.
- In the design of new urban areas there needs to be a return to the grid-like road pattern rather than the continuation of the discontinuous and circuitous road patterns featured in most areas developed since the late 1950's:
  - ◊ to allow for direct and regularly spaced public transport routes serving all directions
  - ◊ to better disperse vehicle traffic thus reducing congestion and the need for excessively wide arterial roads.
- As public transport usually does not provide for universal door-to-door services, public transport users are typically pedestrians at both ends of the trip. Therefore, public transport-friendly urban design is also by nature pedestrian-friendly.
  - ◊ Urban arterial roads should be provided with footpaths and bus shelters.
  - ◊ More frequent intersections along urban arterial roads, coupled with an overall grid system of roads, will allow buses to provide a better coverage and more direct service, and provide for direct pedestrian access to the public transport network.
- The review and adjustment of public transport services is essential and should be ongoing. Urban form, including the transport network, is continuously evolving and public transport services need to successfully adapt to changes in the urban environment in order to achieve the aims of the state government's land use and transport policies.
- A hierarchy of public transport services consisting of express trunk services, district feeder services and local services should be identified. Express trunk services should be designed to compete with the private car in travel time providing high frequency of service on the arterial road network with limited stops. Possible express services to be considered include:
  - ◊ Newcastle CBD - Charlestown via City Road
  - ◊ Newcastle CBD – University – Wallsend via Newcastle Road
  - ◊ Newcastle CBD – John Hunter Hospital – Glendale via Russell Road and Main Road
  - ◊ CBD – Garden City – Charlestown via Bridges Road
  - ◊ Charlestown – Glendale via Myall Rd
  - ◊ Belmont – Charlestown – John Hunter Hospital – University via Pacific Hwy and Charlestown Road
- Belmont - Charlestown and Newcastle CBD - Wallsend with transit or bus lane priority through congested areas would be supported. RTA would also support the bus routes identified in Vol 1, Table 3 of this Issues Paper with the provision of bus priority at signals and bus stops along these routes.
- Although no direct route exists between centres such as Glendale and Charlestown, what is important is that whatever bus services are put in place are competitive with the use of the private car. Priority should be provided to buses at critical intersections.
- Service frequencies and direct routes should be determined for bus services between Toronto and Glendale while retaining the train services, particularly with the planned new station at Glendale.
- Transport resources should be prioritised to providing links that support efficient and effective public transport services.

- The RTA will support the endeavours of Councils to establish demonstration projects. The most easily implemented would relate to their own workforces, and their travel to work habits. Although the percentage of work related trips compared to all trips is low, they do occur at a time of the day with the highest level of traffic congestion.

• State Transit Authority

- State Transit welcomes Newcastle and Lake Macquarie's commitment to improving public transport in the region. A partnership approach between key stakeholders is required to make improvements.
- The role of councils in providing bus stop facilities such as seating, shelter, lighting, pedestrian links and bus zones, and in encouraging public transport use through policies on parking and land use, should be emphasised.
- The safest place to board and alight from a bus is at a visible bus stop. State Transit has published a *Bus Stop Style Guide* to ensure bus stops are safe and give a feeling of security. "Hail and ride" could have adverse safety impacts if buses stop at inappropriate locations. Accessible bus services cannot be offered if kerbs are not clear.
- In Newcastle, 90% of Journey to Work travel is not by bus. Better data are needed to assist planning for other trip purposes. Research data is available from the surveys conducted for the Bus Plan program in 2001. Recent research on service quality undertaken in Sydney could be extended to Newcastle.
- State Transit recognises the role of promotions and marketing in public transport and supports the use of travel demand management programs such as TravelSmart or Travel Blending, and integrated programs such as Living Neighbourhoods.

• State Rail

- This document outlines the potential for a very impressive mode split in favour of public transport in the Newcastle Region.
- The ideals outlined are unlikely to be achieved without imposing stricter parking restrictions.
- 5.3% of journeys to work in the Newcastle Urban Centre are made by public transport. It is unlikely this figure will increase significantly unless driving becomes cost prohibitive to many commuters.
- Increasing public transport services and making the existing systems more efficient are positive steps, however they are only part of the equation. Car parking is an important factor in influencing individual travel behaviour. The management of car parking can be a major contributor to reducing car dependency and improving public transport patronage.

• Environment Protection Authority

- The EPA concurs with the general thrust of the proposed options for revitalisation of public transport services and encourages the strong underlying emphasis to provide a public transport system based on ecologically sustainable development principles.
- The EPA believes that Local Government has a major role to play in encouraging sustainable transport by containing the spatial extent of urban growth and orienting new development to an effective public transport system.
- The EPA encourages strategies aimed at reducing car dependency and improving air quality.
- To reduce the number of vehicle kilometres travelled by private transport, there will need to be a major shift in passenger journeys from cars to buses and trains. The improvement and expansion of the existing public transport system in Newcastle Region along the lines proposed will go a long way to achieving this goal.

- This initiative is also in line with the NSW Government policies *Action for Air* and *Action for Transport 2010* which set in place overall strategies to protect the environment and provide an affordable and accessible public transport system

4.6 Regional Initiatives

In recent times there have been several initiatives for public transport improvements in the Hunter Region. These are all supportive of a regional management approach for a sustainable transport system.

- A **Light Rail Consortium** developed a plan in the early 1990s for revitalisation of the inner city with linkages to regional centres by light rail, replacing the heavy rail where appropriate.
- In 1995 the Department of Transport conducted the **Maitland Transport Study** which recommended integrated strategies for the transport network, land use, roads, public transport, freight, local transport and implementation. The sustainability issues included in the Action Plan covered urban settlement patterns, employment centres, cycleway network, public transport access and service levels, and integrated transport management.
- **Newcastle Regional Chamber of Commerce** championed a further development of a regional Light Rail Strategy in 1996, complete with funding programs, operations plans, infrastructure projects and intermodal integration. An evaluation of this strategy by the Dept of Transport endorsed the light rail concept.
- **Newcastle City Council** assisted with an investigation in 1996 of the *Austrans* Personal Rapid Transit system to serve the new growth areas to the west of Newcastle in a corridor linking the new Glendale railway station through Wallsend to the University and the Mayfield industrial areas.
- **Newcastle Regional Chamber of Commerce** developed an Integrated Public Transport Strategy in 1996 which advocated the coordination of bus, train and ferry services (government and private) in Newcastle / Lake Macquarie under a Newcastle Transit Corporation. This was further developed by the **Newcastle and Hunter Business Chamber** in 1999-2000 and presented to the Minister for Transport.
- The University of Newcastle adopted a **Transport Management Plan** in 1996 which promotes public transport usage instead of more car parking. Since then, up to 13% of people going to the University on weekdays used public transport, compared to less than 5% for the rest of Newcastle / Lake Macquarie.
- **Newcastle Buses** introduced time-based fares in 1997 as a successful strategy to increase the attractiveness of public transport.
- The **Department of Transport** released a Light Rail Strategy for NSW in 1997, which included projects in Newcastle similar to those previously advocated.
- In April 1997, both Newcastle and Lake Macquarie City Councils adopted the **Newcastle Lake Macquarie Bike Plan** 1996. This Plan proposed a network of local and regional cycle routes, with the regional routes spaced on a grid of about 5km. Two priority projects were highlighted: the Adamstown - Belmont and Wallsend - Glendale cycleways along former railway routes. The Plan divided cycleway projects into 5 priority groups, with works worth $17m.
- In 1995 **Port Stephens** Council adopted the **1994 Bike Plan**. The plan proposes a network of local and regional cycleways. The Bike Plan is currently being reviewed to incorporate pedestrian links in the development of an integrated pedestrian and cycle path network strategy for Port Stephens.
- In 1997 Port Stephens Council successfully sought funding for a **Timetable Coordination Project** to liaise with the local transport providers to better coordinate their services. This has resulted in improved timetabling of services.

- **Newcastle and Hunter Business Chamber** developed an *Integrated Transport Infrastructure Strategy* for the Hunter Region in September 1998 which was endorsed by regional representatives of State Government, Local Government, Business and Unions. It identified the need for new port facilities served by rail rather than road, and for new freight rail lines to be built to the west of the urban area. This would allow the existing urban rail lines to be used for more intensive passenger rail services (either light or heavy rail), integrated with feeder bus services. The Minister for Transport adopted key elements of this strategy in his 1998 *Action for Transport 2010* Plan. The Chamber expanded the Strategy in 2000 to include transport infrastructure links with the Central West and North West of NSW
- All five **Local Government Councils** in the Lower Hunter have adopted urban management strategies that rely on greater use of public transport for people to move around the urban areas. The implementation of these strategies requires decisions about public transport to be made by criteria that relate primarily to Lower Hunter rather than to Sydney.
- The Dept of Transport undertook the **Newcastle City Centre Access Study** during 2000. It assessed the risks associated with more at-grade crossings over the inner city rail line, and showed that they were significantly less than the risks associated with rail crossings in similar urban areas.
- In 2001, the Lord Mayor's Transport Reference Group studied options for the future use of the **Newcastle Inner City Rail Corridor** and developed proposals for a multi-modal transport interchange at **Woodville Junction**, west of Hamilton. The proposal is currently being evaluated by Newcastle City Council.
- The Department of Transport has identified **Glendale** as a suitable location for a bus/rail interchange, but further work has to be done to secure access arrangements that will allow buses to operate in an efficient route pattern.
- State Rail and Newcastle Council commissioned a pre-feasibility study into a **new rail station at Kotara**. The Council has exhibited the findings for public comment.
- **Major shopping centre owners** have expressed interest in pursuing strategies that take advantage of greater use of public transport, rather than constructing more car parking spaces.
- **Hunter Area Health Service** has embarked on a program to relocate facilities from Royal Newcastle Hospital. This will require a restructure and integration of regional public transport facilities if it is to be successful, focusing mainly on the enlarged campus at John Hunter Hospital.
- **Honeysuckle Development Corporation** needs a vibrant public transport system if its inner city redevelopment programs are going to be successful and sustainable.
- **Community Transport** funding has been provided for a weekly bus service to operate between Lemon Tree Passage and Nelson Bay to enable local residents to access essential services.
- In recent years, Port Stephens Council has received annual funding of around $100 000 for the building of **bus shelters** under the State Government's Country Public Transport Grants Scheme.
- A key criterion for funding allocation for projects in the Lake Macquarie **pedestrian network strategy** is the improvement of footpaths that provide access to bus stops and railway stations.

4.7 Newcastle Bus Plan

The review of the Newcastle / Lake Macquarie bus network by State Transit in March 2002 was a serious attempt to bring its bus services into line with the significant urban developments and changes to travel patterns that had occurred in the last decade. It aimed to provide more direct services and new cross regional services[22]. However, it also adopted a cost-cutting approach rather than a revenue-maximisation approach which would have been more appropriate to achieve a transport system that offered a sustainable travel alternative.

In this network review, resources were re-distributed so as to achieve a greater degree of compliance with the contractual minimum service levels over the whole network. This meant that in some areas, frequency levels and destination choices were reduced. The sustainable approach would have been to ensure that the routes were designed, operated and promoted in a way that encouraged people to take more advantage of the existing frequency levels and therefore provide a reasonable level of viability. In most cases, issues such as potential passenger demand did not rate highly in the stated decision-making criteria.

In some cases, the new direct routes reduced travel times, such as between Glendale and University, and frequencies were increased, such as between Valentine, Charlestown, The Junction and Newcastle (direct service every 30 minutes replacing previous hourly service with change at Charlestown).

However, in other cases, the travel times between major centres on both trunk and local routes were increased, whereas a decrease in travel times is needed in order to promote public transport as an acceptable alternative. For example, to arrive at the destination by 9.00am, travel times increased:

- ◊ Swansea to Charlestown by 3 minutes
- ◊ Swansea to Newcastle by 8 minutes
- ◊ Swansea to University by 16 minutes
- ◊ Wallsend to Newcastle by 12 minutes.

Services were revised in September 2002 and the running times were improved. However, in some cases the benefits of new direct routes were reduced by introduction of diversions in response to local pressures. There has been very little effective promotion of the new services, so that many people would be unaware of the travel opportunities that the bus services now provide.

The BusPlan placed more emphasis on the need for passengers to transfer between routes, but without the interchange infrastructure being provided. With most routes operating on hourly frequencies, it is very difficult to coordinate timetables so that transfers can be made without long delays.

The BusPlan project demonstrated how difficult it can be to modify established public transport services to achieve a better allocation of resources. Despite extensive public consultation and research[23], there were significant groups in the community who did not accept the effects at the local level of the implementation of the BusPlan objectives. A great deal of sensitivity is needed in adjusting existing services, but at the same time the need to provide services to attract new patronage markets is also important.

During the consultation and implementation phases of Bus Plan, there was extensive media coverage. There was a widespread community view that State Transit should have taken a broader approach to its service planning and encompassed more of the community and sustainability issues. This is difficult for State Transit (or any other operator) to do alone under the current institutional regime for public transport in NSW.

[22] *Newcastle Bus Plan* Brochure distributed by State Transit, May 2001

[23] *Newcastle Bus Usage Survey 2001* and *Mail Survey of Respondents to Newcastle Bus Plan, Sept 2001* Hunter Valley Research Foundation, 2001

However, State Transit may have missed an opportunity to adopt a more dynamic approach to stimulating better public transport. In 2001 it had advocated a 'partnership approach between key stakeholders' to achieving public transport improvements (see Vol 2, §4.5.2). However, when reporting on the Bus Plan program in September 2002, it made no mention of this and stated that it 'operates a bus service in Newcastle that serves a predominantly school-based market of 170 000 trips a week', and that 'the Bus Plan aimed to cut service kilometres which placed stress on maintaining minimum service levels set by Transport NSW'[24].

Using State Transit's own data, 59% of patronage is not school students (see Vol 2, §2.4), but is made up mainly of adults, where market share could be significantly increased. The 'partnership approach' would have taken into account the urban strategies of Newcastle and Lake Macquarie which depend on higher service standards for public transport rather than an attitude of reducing costs to the bare minimum.

Bus Plan has not generated patronage growth because of the reduction in service hours, but the efficiency has increased: boardings per route km have increased from 0.94 to 1.44[25]. Without a patronage increase, this efficiency measure is not commensurate with the sustainability approach to provision of public transport.

Subsequent to the implementation of the BusPlan, State Transit has announced the purchase of new buses for the Newcastle fleet. Although the buses will have low floors for easier access, they will be diesel powered. The opportunity to introduce alternative fuel such as CNG into the Newcastle bus fleet, as applies in Sydney, has not been taken.

ALTHOUGH the uproar over the new bus timetables seems to be coming to a head, with drivers, politicians and others getting involved, there was only a minimum of interest this week, except for a few letters related to particular routes. But if Darrell Stone's figures yesterday are accurate they deserve consideration. Particularly the figure that shows that the cost of one mile of inner city freeway could provide an extra 640 modern buses. Reduce that to 100 extra modern buses and subsidise their running for X number of years and you're really talking about improving Newcastle's bus service.

Tony Troughear
Letters Editor

newclet@mail.fairfax.com.au

I was interested to read that 30 years ago the *National Times* reported that 'for every mile of inner city freeway built in Australia's capitals, authorities could substitute: five miles of double railway track; or 95 miles of double tram track; or 23 modern trains; or 250 modern trams; or no fewer than 640 modern buses.' What are our authorities doing now? Building miles of freeway, of course. Sadly, while ever this mentality pervades our government, the sensible move to more and better public transport systems will never occur.

Darrell Stone, Belmont

Newcastle Herald 3 May 2002

[24] *Better Buses Program - Matching Services to Travel Patterns* Wendy Adam, Service Development Manager, State Transit, presentation to Travel Demand Management Seminar, Sydney, September 2002
[25] ibid

5 Understanding Public Transport

While there are many idealistic comments made about the value and desirability of public transport, there is often little understanding of what are its essential components, or what has to be done to make it function effectively. Some of these issues are outlined in this section of the Paper.

Daring to dream about public transport

Leone Hay

I HAD a lovely dream the other morning.

I dreamed that my bus came on time.

I had stepped calmly out of the house (I think I may have even been whistling), crossed the road, reached the bus stop, turned to see my bus coming around the corner and when I embarked, there was a seat available for me.

Then I woke up.

My real public transport experiences are far different of course.

There are so many things I hate about public transport, but there are also a few I don't mind, which sort of weakens the extreme anti-feeling enough to allow me to actually use it.

I hate public transport when I am running out the door in the morning, grabbing an umbrella and struggling to put on my jacket, all while rushing to reach the bus stop in time.

I hate that more often than not I end up waiting for 10 minutes in the cold, my thoughts swinging between cursing the bus for being late and worrying that it was me who was tardy.

I hate that I have to stand there at the mercy of the bus's timetable as the passing cars travel at their own pace, directly to their destination.

I hate it when I sense that the people in the cars driving past are laughing at me as I drop my umbrella while fumbling with my purse.

I hate it when I don't get a seat and am left to struggle to keep my balance as the driver throws the vehicle round the corner and school bags bash into my back.

I really hate it when it's raining.

And I especially hate it if I've finished work early but my bus doesn't come for another 30 minutes.

But, if the bus comes on time, it's not so bad.

And when I get a seat, I can read my book and am usually so engrossed in the story I don't even notice I'm on a bus, so I guess I like it then.

Once, at the bus stop, a musician decided to strum some tunes on his guitar for his fellow commuters and the vibes created such a relaxing atmosphere, I couldn't help but enjoy that experience.

When I think I am one of those good people who help to reduce greenhouse emissions by taking public transport, I'm kind of glad.

When I get off just a few metres from work instead of 10 minutes' walk from a free parking space, I think it's pretty good.

And when I realise I don't have to worry about getting a parking ticket, then I think it's all worthwhile.

It's just a shame public transport isn't better than it is. I guess it's adequate, but it should be a preferred alternative to driving not just a necessary evil.

It should be stress-free, pleasant even.

It should be flexible, frequent and reliable.

It should offer more to the commuter, something that they wouldn't get otherwise, like a free newspaper for instance or a token for a free coffee somewhere.

The whole system should be readily upgradable and expandable to keep up with and adapt to the future needs of commuters.

It should be interactive with its public to regularly check whether the service is really servicing their needs.

What it really needs is a revolution.

The future of public transport should not be conventional.

It would be great if you could book a seat on a bus or mini-bus over the Internet for a particular time, from and to a particular destination.

If someone has already booked a bus with your needs, you should simply be able to join it.

And, of course, this bus would stop right outside your door at the designated time.

Oops, I think I must be dreaming again.

I guess living in a regional area, we may never have the population necessary to warrant such a radical change to public transport, but it's nice to dream.

THE NEWCASTLE HERALD Tuesday, September 10, 2002 9

5.1 Co-ordination

An underlying theme of this Paper is that in order to achieve the desired level of urban sustainability, public transport usage has to grow from 5% to 20% of daily trips in the region. Another way of saying this is that a mechanism has to be found to generate this change in urban culture, travel habits and government priorities.

It is quite likely that one of the real reasons why the public transport industry is reluctant to embark on market penetration and growth strategies is because it does not have the confidence that it can achieve these targets. This is partly because the industry cannot act alone: it needs the cooperation of all levels of Government.

Unless the infrastructure is provided that is conducive to more attractive public transport, improved services by themselves will not necessarily change the modal split greatly. The corollary is also true. Infrastructure programs and government aspirations will not achieve significant changes until the standards of public transport services are improved.

Public transport is not an end in itself: it is a means to achieve other objectives. If one leg of a trip cannot be made by public transport, generally the whole trip will be made by some other means. An example of this often occurs with travel to Sydney. Because of difficulty or uncertainty about travel to the final destination in Sydney, people tend to choose to travel by car all the way, rather than by train from Newcastle and then by local bus or train in Sydney.

A concerted effort by government agencies is required to remove the impediments to public transport choice, in return for the operators agreeing to provide improved service standards. This type of support from the government can include projects such as:

- ◊ urban development programs
- ◊ transport planning strategies
- ◊ transport planning models
- ◊ optimal service standards to achieve modal split targets
- ◊ transport systems integration
- ◊ network design and service reviews
- ◊ demonstration projects

- ◊ service information systems
- ◊ leadership by example
- ◊ promotions and marketing.

There is a need to improve co-ordination between transport service providers in the Lower Hunter. Overlapping routes, lack of patronage for inner city services, few linkages between rail, bus and ferry, limited co-operation between companies in providing chronological timetable displays, and conflicts between freight and passenger train services are some of the issues that confront transport integration in this region.

Integrated ticketing and timetabling has been shown to increase patronage in other cities. Newcastle Buses and CityRail Trains are both government controlled bodies, yet there is no integration in their timetabling. There is no effective integration of fares, tickets and timetables between the various government and private bus and train operators in the Lower Hunter.

There are enough capital resources (trains and buses) in the Hunter Region for a better than half-hour service to be provided to multiple destinations through all urban areas. These resources are needed for the carriage of school students, but for most of the rest of the day, they lie idle. Given that their capital and overhead costs have already been paid for (through various government funding schemes), they only need to earn marginal revenues at off-peak times to achieve viability. Marginal revenues can be earned from patronage at about a quarter capacity.

Hence, there is no sound economic argument why bus and train services could not be increased at off-peak times to provide an integrated and coordinated service linking buses to buses, and buses to trains. The current inefficient duplication of services and lack of coordination between operators would need to be replaced to achieve the desired level of integration, coordination, frequency and efficiency.

5.2 Cultural climate

Such is the power and acceptance of the private car in today's society that many people (but not all people) will use the car no matter what its cost, inconvenience, safety risks or environmental impacts, rather than consider an alternative. There are many reasons for this, but irrespective of the explanations, the operators of alternative travel modes (various forms of public transport) need to adopt a more aggressive approach to the travel market.

In addition to the more obvious marketing and coordination issues, organisations with a vested interest in promoting greater use of public transport have to be prepared to influence the institutional factors controlling service provision if they are going to redress the entrenched trend towards greater car usage levels. In the Hunter Region, such organisations include the local Councils, the University, TAFE, schools, Hunter Area Health Service, Business Chambers, trade unions and community groups.

Public sector service providers are dominated by a cost-reduction syndrome, as distinct from ‘best value’. Although there has been more recognition in recent times of a customer focus, service planning still suffers from an overall directive to contain costs rather than respond to market demand and patronage potential. Institutional constraints on the removal of long-standing inefficiencies make it difficult to redirect available resources into new service provision.

Private sector service providers are dominated by business profit objectives through cost minimisation, rather than seeking an expanded market base. Because of substantial payments they receive from the government for concession fares and school student travel, they have not developed a strong market focus. Initiatives to introduce direct services to the University of Newcastle and John Hunter Hospital in 1992 have not been expanded, despite the success of these new services.

Neither type of service provider is obliged to retain any particular service that may be beneficial to, or initiated by, a particular travel generator (such as a shopping centre) if other overriding considerations dominate. Factors that have little or even nothing to do with service quality and transport management can influence service providers to alter or cancel services.

Local government is perhaps in a stronger position than any other organisation or community group to spearhead the changes that are necessary to community attitudes and institutional procedures for the delivery of an effective public transport system that can be chosen as a realistic alternative to personal car travel.

5.3 Service Contracts

The contracts under which the bus and ferry services are provided do not specify any requirement to participate in urban transport management strategies or environmental enhancement programs. Federal, State and Local Governments all have pro-active policies aimed at creating more sustainable urban environments, but they have not yet adequately addressed how to facilitate the participation of transport service providers.

Under the Passenger Transport Act 1990, contracts are issued by the Department of Transport to bus companies giving them exclusive, but contestable, rights to operate services in a defined area. The contracts specify, among other things, the minimum service levels that have to be provided within residential areas, but they do not specify the regional centres to which these services must operate.

The contract area boundaries are determined by historical areas where bus companies have operated, rather than an area that is related to current and future urban travel patterns. The demand for a more pro-active regional public transport system could provide the opportunity to advocate changes to the Passenger Transport Act to overcome its rigidities and to foster a more integrated transport system.

The minimum service levels specified in the bus operator contracts are well below what would be needed for a sustainable urban area. Generally, in most urban areas, except for the more densely populated inner city areas, buses are only required to operate hourly within 400 metres of residences.

In the past, Newcastle Buses has provided services in excess of these minima in some suburbs, but this was changed in March 2002 with the new bus network.

The typical minimum service levels that apply in NSW Bus Contracts are shown in Table 11. Most contracts in the Lower Hunter are graded A3 or lower.

Table 11: Minimum Service Level Frequencies in Bus Service Contracts

Grading	**A1**		**A2**		**A3**		**B1**		**B2**		**C1**		**C2**		**D**	
Time Period	P	S	P	S	P	S	P	S	P	S	P	S	P	S	P	S
Weekdays																
6.00am-8.30am	20	30	30	30	30	30	30	30	30	60	30	60	30	60	60	60
8.30am-3.30pm	20	45	30	60	45	90	45	90	60	120	60	90	60	120	120	120
3.30pm-6.30pm	20	30	30	30	30	30	30	30	30	60	30	60	30	60	60	60
6.30pm-8.00pm	30		45		60		60		60		60		60			
8.00pm-9.30pm	30		45		60		60		60		60					
9.30pm-11.30pm	60		60													
Fridays																
11.30pm-12.30am	60		60													
Saturdays																
6.00am-8.30am	30		45		60		60				60					
8.30am-5.30pm	20	60	45	120	60	120	60	120	60	120	60	120	60	120		
5.30pm-7.30pm	30		60		60		60									
7.30pm-12.30am	60		60													
Sundays																
8.00am-6.00pm	30		60		60		60		120							
6.00pm-10.00pm	60		60													

Gradings relate to the characteristics of the contract area, determined by population, car ownership levels and proximity to other public transport services
P: Minimum frequency (minutes) on primary routes, which should be within 800m of residences
S: Minimum frequency (minutes) on secondary routes, which should be within 400m of residences
Frequencies have to be increased above the minimum requirement in response to patronage demand

The NSW Department of Transport has acknowledged that

> it has become increasingly apparent that the (Passenger Transport) Act is too oriented to meeting minimum service standards and does not encourage increased performance in bus services[26].

Despite the numerous government programs and plans to improve public transport, the minimum service requirements in the bus contracts have not been increased since they were first introduced in 1991.

In the text book for the Certificate of Transport Management at the University of Sydney, the chapter on Marketing Bus Services points out[27]:

- the generalities of minimum service levels may not be appropriate for an operator's contract area
- minimum service levels do not provide a blueprint for profitable operation. Profitability will not be achieved unless operators revise their cost structures, implement a marketing program, and withdraw from peripheral and unprofitable activities
- minimum service levels may miss market opportunities, or direct services to inappropriate destinations.

Throughout the Lower Hunter, each bus company has an individual approach as to how services are provided, leading to a large amount of inconsistency in how the community sees the delivery of public transport services. In a sustainable system, public transport service quality should not be a function of the operations attitude of individual operators. Rather, it should be determined within a regional sustainable transport plan, within which the individual operators would operate consistently.

5.4 Economic issues

The travelling public does not really worry about who operates the trains or buses: they are far more concerned that services are available to get them where they want to go when they need to get there at a reasonable fare in safety and comfort. If, for network or operator convenience, there has to be a change of vehicles, then there should not be a fare penalty passed on to the passenger.

The modern principles of competition and economic reform are having a negative impact on the effectiveness of public transport. Individual operators are tending to be become more insular as a result of being independently competitive. In so doing, they are losing sight of the fact that it is primarily 'public transport' that has to be marketed, rather than individual operator 'brand names'.

Improved services as a result of introducing a competitive environment have not so far been realised in the Lower Hunter, and if current observed operations are any indication, any such improvements are not likely in the short term. Neither are they likely in the long term, unless the inefficiencies of duplication, circuitous routes and lack of coordination are addressed as well. This would optimally be achieved via an holistic review and integration of the region's transport networks.

The Minimum Service provisions under the Passenger Transport Act aimed to achieve a balance between financial viability for bus companies and reasonable levels of service to bus users. They took into account the revenue received from the government in subsidised travel for pensioners, senior citizens and students. Private bus companies have traditionally maintained that this income is essential to support the other services that they are required to provide.

[26] *Performance Assessment Regime Discussion Paper,* NSW Dept of Transport, Sept 1998, p 2

[27] *Operating a Bus and Coach Business: Insights and Practice,* Brewer and Hensher, Sydney, 1997, pp 65-66

It is somewhat disturbing therefore, in the context of achieving sustainable service levels in the Lower Hunter, that an agreement under the previous state government is allowed to continue. Private bus companies were given access to school student services within the contract area of Newcastle Buses, but were not required to provide the commensurate level of normal route services. At the same time, Newcastle Buses is deprived of the revenue from these services and the opportunity to integrate them with their other services.

The government has subsequently directed Newcastle Buses to reduce its services because of unacceptably low levels of financial returns. This situation would not have been so bad if Newcastle Buses had been able to retain the school services that it would normally be entitled to under the provisions of the Passenger Transport Act.

In pursuing the economic argument for better public transport, the economics of network integration are often overlooked. Positive economies of network integration arise because of the opportunity to provide a more integrated service compared to the services of individual operators. In an integrated service, profitability is enhanced because:

- the costs of an integrated service are less than the sum of the costs of services of individual operators
- the revenue from an integrated service is greater than the sum of the revenues from services of individual operators.[28]

Hence, because of lower costs and higher revenue for the use of the same resources, more services can be provided for the same net 'profit'.

5.5 Sustainable Service Standards

The current standards for public transport operations are not conducive to the scale of improvements that are envisaged for ecological sustainability. These standards have to be upgraded as part of the improvement process, providing for better frequencies, route coverage, reliability, passenger facilities and information.

Comparative research undertaken in Melbourne has shown that 'urban density' was a poor explanation for varying public transport usage rates, but that 'service quality' was strongly correlated to public transport usage. In Melbourne, the service quality was provided by trams rather than buses, high frequencies (10-15 minutes), and up to 19 hours of operation each day. Off-peak patronage on the high service quality trams was 34 per trip, whereas on equivalent low service quality buses it was 11 per trip[29].

Inner city transport in Newcastle is reasonably frequent, but services decrease rapidly in suburbs further out than Broadmeadow. Nowhere else in the Region are services provided at a sustainable level.

Before public transport can be regarded as a sustainable transport option, **service levels have to be set at a basic frequency of quarter-hourly throughout the day** (nominally 6am to 7pm) and half-hourly at other times. This basic frequency should apply seven days a week, with perhaps slightly later starts at weekends.

Frequencies at this level are essential:

- to attract the patronage that will achieve sustainability targets
- to produce the revenue that will remove the need for operational subsidies
- to provide effective coordination of services between various modes and routes.

[28] *Local Urban Bus Services: Natural Monopoly and Benchmark Contestability*, David Hensher, 1993, p 3

[29] *Public Transport Decline in Melbourne: A Question of Density of Service* Michael Frazzetto, Urban Policy and Research, Vol 17 No 2 1999

In addition to high frequency services, there are a number of other standards which will be conducive to making public transport convenient, attractive and safe. Although these are higher than what is normally provided, it is considered that they represent the change in attitudes that has to be applied if sustainability is to be taken seriously in order to achieve the desirable modal splits.

Of particular importance is the need to rigorously retain memory timetables so that travellers can easily remember what times services pass a particular point. There is a growing tendency for memory timetables to be abandoned during peak times, especially to cater for student travel. In some cases, a regular trip is omitted from the memory pattern so that the bus can be used for a school trip, leaving long gaps in the services for non-school travellers. This practice can be avoided with more careful attention to timetabling and greater emphasis on service standards designed to attract more people to public transport.

Various sources of funding for public transport and environmental improvements are available to implement these standards. The first task is to achieve agreement that these are the standards that need to be adopted.

• Operations Standards

To achieve an acceptable level of convenience, the service standards might be of this order:

- Public transport services operate at a frequency of at least 15 minutes during the day, and at least 30 minutes at night
- Timetables maintain a memory pattern throughout the day, and as far as possible are the same for each day of the week
- A majority of dwellings in urban areas are within 5 minutes walking time from a bus stop
- Timetables are coordinated so that there is minimal waiting time with transfers at interchanges.
- Scheduled connections are guaranteed through the use of network communications and control systems
- Service reliability is maintained with a specific limit of not more than 1 minute early or 3 minutes late at any advertised timing point
- Traffic signals are calibrated and monitored to ensure that there are not excessive delays to buses
- Special arrangements are adopted to maintain reliability when there are unscheduled disruptions:
    - ◊ Buses and transit supervisors vehicles are given priority to get past traffic blockages and road works
    - ◊ Road works that disrupt access to bus stops include alternative arrangements for bus passengers
    - ◊ Buses are diverted off-route by network control past blockages. When this occurs, passengers at affected bus stops are conveyed by alternative arrangements such as taxis, supervisors vehicles or replacement buses
    - ◊ Information is displayed at bus stops and railway stations affected by service delays and disruptions
    - ◊ Bus connections with delayed trains are maintained
- Vehicle cleanliness is maintained to a high standard throughout the day
- Passenger behaviour on trains, buses and ferries is managed to ensure that it is not a deterrent to travel by other people.

- **Railway stations**

The basic facilities at each railway station would include:

- ◊ Access by ramp or lift as well as by stairs
- ◊ Platform seating and shelter
- ◊ Drinking water
- ◊ Public phone
- ◊ Communication to network control
- ◊ Ticketing machine
- ◊ Service information
- ◊ Public address system for train announcements.

There are several stations in the Lower Hunter where improvements are needed to meet these basic standards.

5.6 Bus Stops

The bus stop is the place where people access the public transport system. A bus route is only as good as the location of the bus stops along the route in relation to where people come from or go to, and how they get there.

On the assumption that most people walk to or from the bus stop, the most basic requirement for a bus stop is a good footpath system. In many areas of the Lower Hunter, footpaths are non-existent, and walking tracks are sometimes not available along the verge of the roadway.

At the bus stop, there needs to be recognition that people have to wait, and that they need some re-assurance that they are at the right stop for the bus they want to catch. At the majority of bus stops, neither of these facilities is provided. This creates a large backlog of work to be done to bring bus stops up to a standard where they are satisfactory for a sustainable transport system.

The minimum requirement for any bus stop should be:

- ◊ bus stop signage with a distinctive logo
- ◊ locality identifier
- ◊ hard stand area on the footpath
- ◊ waiting seat
- ◊ shelter (such as a shade tree set back from the kerb)
- ◊ rubbish bin
- ◊ timetable and route information display
- ◊ overhead lighting.

The facilities at bus stops should be regarded as an essential component of the road structure and funded accordingly.

Where vehicle restrictions are displayed along the kerb space adjacent to the bus stop, it is usual to support the bus stop with a bus zone. Where circumstances have changed and the bus zone is no longer needed, it should be removed.

The signage at the bus stop should clearly indicate which bus routes use the stop. Supplementary information should give details of other routes that use nearby bus stops.

In November 2002, Transport NSW issued guidelines for public transport signage and information display, including comprehensive details on how information should be installed and presented at bus stops[30]. Transport NSW has allocated $5 million to local government over the next three years to retrofit bus and ferry stops with new signage. In the Lower Hunter, funds will be available under either this program or the Country Passenger Transport Infrastructure Grants Scheme.

Because bus stops are locations where people gather, it is important that they are kept clean and tidy at all times. This needs more than a cursory maintenance program, and the responsibility probably falls to the local council. Rubbish, graffiti and any damage should be removed on a daily basis.

Careful placing of street furniture and trees is needed. People waiting for a bus must at all times have a clear view of the approaching bus, and the bus driver must be able to easily see that passengers are waiting. Trees on the approach side should be trimmed so that buses can pull into the kerb at the bus stop, and within the bus zone where one is provided. The rubbish bin, waiting seat and footpath shrubs should not be placed where they will obstruct the use of the bus doors.

Where bus bays are provided, the pavement should slope down to the kerb. If bus bays are built with the slope down to the original kerb line of the carriageway (usually for drainage), buses stopped in the bus bay lean away from the kerb, thus raising the height of the entry step and causing difficulties for people with mobility difficulties.

In urban areas, bus stops should be located about 250m apart. They should ideally be located close to intersections and where footpaths meet the roads that are used for bus routes.

In villages and rural areas, the use of bus stops is generally less than in urban areas. But because of their isolation, bus stops in rural areas still need to have the basic infrastructure.

The standards for bus stops outlined in this Issues Paper are supported by the results of Port Stephens Social Survey (see Vol 2, §2.6)

While local government would be responsible for ensuring that bus stop infrastructure was provided, the funding for this can come from other sources. Because of the benefits from reduced vehicle emissions, the Australian Greenhouse Office has programs that fund these types of improvements. For example, the City of Canada Bay (inner western Sydney) has received funding from the Greenhouse Office for upgrading ferry terminals, installing bus shelters, and providing bikeway signage[31].

State Transit has produced a Bus Stop Style Guide which gives details of the dimensions for bus stops and kerbside fixtures.

5.7 Bus Passenger Facilities

It is difficult to attract people to public transport if they have to wait for the bus out in the open in all sorts of weather: rain, wind and sun. From this viewpoint, bus shelters are as essential to the bus network as are the vehicles and the roads they run on.

The simplest form of shelter is a shade tree. Simple structures can be installed at low usage sites at minimal cost. At busier sites, there are a number of options:

- shelters with advertising rights, usually at sites with high traffic exposure
- shelters at major centres, perhaps in conjunction with adjacent development
- shelters provided by local councils, either from their own funds or from public transport improvement programs

[30] *Best Practice Guidelines for NSW Public Transport Signage and Information Displays* Transport NSW, Version 1, November 2002

[31] Presentation by Joey Tabone, Australian Greenhouse Office, *Travel Demand Management - The Smart Alternative* Seminar, Sydney, September 2002

- shelters integrated with the neighbourhood, termed 'community shelters'.

Local Government controls the location and the supply of the bus shelters and is able to exercise some influence on the chosen sites.

The priority for allocating the location of bus shelters would reflect the number of people using a bus stop, major centres, locations where people change buses, and bus stops used predominantly by elderly people.

Within the context of integrated and sustainable transport, it may be appropriate to consider the concept of 'community shelters' which can have a range of functions and be blended into the streetscape. They perform a multi-purpose role, not only as a bus shelter, but also as a rest area for pedestrians, a local meeting place, shelter from wind and rain, and a local information notice-board. With a high community profile, the problems of vandalism are minimised.

Each shelter should have a prominent unique locality name. The shelters need to have lighting, and can often be placed alongside indented bus bays which can also be used by taxis. Where pedestrian crossings are provided, the community shelters should be located nearby. It is important that the safety of people walking to the shelter is given due prominence.

The community shelter is also the appropriate location for the local post box and public phone. This would reduce vandalism at isolated locations, and provide some degree of certainty of where to find a public phone and post box when needed.

One of the most difficult tasks in attracting people into public transport services is providing information about where the services run, and at what times they operate. Community shelters are an ideal place to display bus timetables and route maps, and to give information on how to find out more details, as well as a map of the local area. The technology is now available for information to be displayed about the scheduled and actual arrival times of the next buses, including advice of any delays because of traffic congestion or service disruptions.

Community shelters do not have to be relocated if there are changes to the bus route. They still have a number of other functions to serve.

Local Government is the appropriate body to be responsible for provision of community shelters, their lighting, maintenance and information displays. They should be treated as a community facility, not just part of the bus network, and funded accordingly.

The provision of these facilities could be included in Council works programs and funded by §94 contributions, urban enhancement programs, commercial sponsorship and developer contributions plans. Public transport should be integrated into the community, rather than as an add-on extra for a minority.

The State Government's Country Public Transport Grants Scheme provides funds for new bus shelters in rural areas. Port Stephens Council received $100 000 in 2000. In allocating these funds, the Minister for Transport stated that 'quality facilities were needed in country areas to keep local families using public transport'[32].

5.8 Service Information

In recent times it has been established world wide that easy access to transport information in various forms is an essential component of any program to enhance the role of public transport[33].

Specifications for information at railway stations, bus stops, taxi ranks and interchanges would include:

[32] Newcastle Herald, 4 December 2000

[33] *Marketing: Public Transport with a Human Touch* Public Transport International, UITP, 2/2000

- ◊ service information about the times and destinations of buses/trains using that stop and any stops nearby
- ◊ network diagram
- ◊ fares and ticket details
- ◊ operator contact details.

Technology is now available for each bus stop and station to have a visual display of the next scheduled bus/train departures and the actual waiting time for these buses, based on the real time location of the bus/train.

Other information formats include:

- ◊ displays inside the bus/train showing the location name of the next stop
- ◊ network diagrams in each bus/train
- ◊ local service information, similar to that at interchanges, inside shopping centres
- ◊ timetable and information brochures in self-serve racks at railway stations, interchanges, shopping centres, information centres, council offices, libraries and community centres
- ◊ transport guides showing all services in the region, network maps, ticketing details and information about how to get to the main destinations.

There have been some advances in recent years in the amount of information that is being displayed. From this, several issues have emerged:

- the information is often computer generated. It is output from a generic program, which in many cases produces information that is confusing or not very useful at an isolated location within the transport network
- the information is not always updated at the time that service changes are made
- the display case is not maintained and cleaned, rendering the information difficult to read
- there is no consistency about where information is displayed
- bus stop information only refers to services at that stop; there is no information about other services at stops used by intersecting routes.

Although most Tourist Information Centres carry limited stocks of public transport timetables, they are usually not on display and have to be specifically requested. This does nothing to promote the potential use of public transport in the region. Information Centre staff often have only limited knowledge of public transport services, and are hampered by the lack of a regional guide.

The 2003 tourism guide for Newcastle and Lake Macquarie contains no mention of public transport services in the Lower Hunter, apart from a statement that trains run from Sydney and a small advertisement by Port Stephens Coaches[34]. Information about how tourists can move around the region by bus and train should be regarded as core information about the region's assets, and not be relegated to whether individual operators place an advertisement in the publication.

Timetables for Newcastle services are not stocked at the main Information Centre in Wheeler Place at Civic because, according to staff, 'they do not fit the image of the Centre'. Instead, inquirers are directed to the foyer of the nearby Council offices, which are not open at weekends.

[34] *Free Guide to the Cities of Newcastle and Lake Macquarie* Lake Macquarie and Newcastle City Councils, 2003

A sustainable approach to transport will find a way to avoid the necessity for this type of notice, which was displayed in the foyer of council offices in April 2000

5.9 School Transport

The capacity of buses, and the number of buses in the operators' fleets, are largely determined by the demand for carrying school children each morning and afternoon. As a result, services for other travellers on normal routes are reduced at these times, which coincide with the morning commuter peak and the start of the afternoon commuter peak.

There are two aspects of this situation which could be improved under a sustainable transport approach.

- The provision of footpaths and cycleways throughout a neighbourhood and school catchment area could lead to a significant reduction in the number of buses needed for school transport, thereby making more available for improved commuter services.
- The additional buses that are used for school transport should be retained in service throughout the day so as to provide higher service frequencies and a local community transport service.

Although some work is being done to provide greater safety for students outside schools, the program needs to be expanded not only to provide safe pathways for walking and cycling but also facilities at the school for storing cycles, helmets and personal belongings.

School buses are already funded to varying degrees by the state government. Their continued use throughout the day to provide improved service levels would enable more people to use public transport and thereby generate sufficient revenue to cover the additional marginal operating costs.

This approach is supported by the recent NSW Public Accounts Committee Inquiry into the School Student Transport Scheme which recommended that

> *The Department of Transport survey communities and review existing information to find a mechanism to increase the use of SSTS buses outside peak hours*[35].

5.10 Rural Transport

Currently there is no effective mechanism to provide regular public transport between rural areas, villages and towns and the nearest regional centre.

The only regular rural services in the Lower Hunter are between North Rothbury, Branxton and Maitland, and for rural areas along the main road between Port Stephens and Newcastle.

[35] *Inquiry into the School Student Transport Scheme*, NSW Public Accounts Committee Report no 131, February 2002, p 49

In some places, a limited service is available on school buses, but these only operate one way early in the morning and in the late afternoon for 40 weeks a year. In other places, there is sometimes a bus or coach service that runs between two larger centres, but the times may not be convenient for small centres along the way. Publicity about available services is usually poor, and facilities for catching buses are often non-existent.

In some places, there are community bus services that only operate once a week. They are designed to meet the travel needs of a very specific group in the community. Rural people should not be expected to accept this type of limitation on their travel options.

In all rural areas, the school buses and community buses are fully funded by the state government. These buses range from small minibuses to large articulated vehicles. They often run empty between their depot and the terminus of their run.

In line with the recommendation of the NSW Public Accounts Committee (see §5.9 above), it makes sense to keep these buses in use throughout the day, providing a transport service for all people in the community. Local councils are in a position to facilitate the implementation of this recommendation by identifying areas of primary need, setting up demonstration projects, and providing support infrastructure and information.

Funding for any additional use of these buses only needs to cover marginal costs of direct wages, fuel and maintenance. All the overhead costs of capital, depreciation, employment and management have already been funded through the School Student Transport Scheme or the Community Transport Scheme. There are enough people living and needing to travel in rural areas to cover marginal costs at reasonable fares.

'Reasonable fares' are not the same as 'approved fares' as determined by the Department of Transport. The approved fares take into account full cost recovery, and are usually too high to be attractive as an alternative travel option in rural areas.

The basic objective should be to provide for several return trips each day between rural villages and towns. This would give people the opportunity to go to work, to do shopping, attend to personal affairs, visit friends, and connect with other trunk services. The rural transport services should run at least 6 days a week, including the school holidays.

The initial task would be to set up a network of rural transport services and to promote their use. Because this is such a dramatic change from the current situation, there would need to be extensive promotion and information distribution. There would also need to be facilities in the larger towns for rural travellers to leave their shopping while they were engaged in other activities.

Rural transport routes that could be considered include:

- Wollombi - Cessnock
- Branxton - Rothbury - Pokolbin - Cessnock
- Wyee - Morisset - Toronto
- Gresford - Paterson - Maitland
- Dungog - Clarencetown - Seaham - Raymond Terrace
- Tea Gardens - Karuah - Raymond Terrace
- Lemon Tree Passage - Salt Ash - Nelson Bay.

5.11 Traffic Management

Traffic management schemes in recent times have tended to make bus routes less attractive to passengers because of restrictions on road usage, delays at turns, meandering routes, long walking distances to bus stops, and poor access to major centres. Unless these trends can be reversed, more people will resort to car usage, negating some of the benefits of the traffic management schemes.

Many traffic management schemes re-allocate the use of kerb space so that bus stops have to be re-positioned: often in a way that disadvantages passengers.

People's access to bus transport occurs through the bus stops: they have to be placed so that walking distances are minimised, and so that *kiss 'n ride* facilities are readily available.

Where possible, traffic management schemes should not place Stop and Give Way signs against bus routes. They should aim to minimise the problems which often occur with buses having to make right turns out of residential areas onto busy arterial roads, without the assistance of traffic lights. Even if the bus is able to 'force' its way through an intersection, it is the cars and timid drivers ahead of the bus in the traffic queue that cause the major part of the delays to the bus.

If the buses do not travel through residential areas, passengers often have to walk to the main roads and cross them. For many people, this is undesirable, unacceptable and unsafe. The location of bus stops on busy roads has to be accompanied by traffic management measures that enable bus passengers to cross the road safely.

Buses should not be required to make circuitous and time-consuming diversions:

- in response to traffic management restrictions. Buses do not have the same flexibility as other vehicles to avoid congested intersections, because they usually have to call at a bus stop associated with a patronage generator, but still make turns at nearby intersections.
- to reach bus stops at awkward locations at shopping centres. In many cases this occurs because priority is given to car access and parking.

In some locations, consideration can be given to allowing buses to make a right turn where it is banned for other traffic. The delay in the traffic lane caused by the bus waiting to turn right only occurs for a couple of minutes each hour. It can be shown that this delay affects less people than occurs when a bus load of passengers is delayed, or when the bus has to follow a circuitous alternative route.

Bus priority measures at intersections with traffic lights have been shown to be effective in promoting the acceptance of public transport in traffic management strategies. In the Newcastle / Lake Macquarie area, bus lanes have been provided at selected intersections controlled by traffic signals. In-road detectors sense the presence of a bus and give the bus lane a green phase for a few seconds ahead of the other traffic lanes. This permits the bus to move off first, and also to make a right turn from the kerb lane where it is necessary to have a bus stop close to the intersection.

However, there are still problems with significant delays to buses caught in the traffic queues where the traffic signals give long green phases to the main traffic flow, and short green phases to side roads used as bus routes. Unscheduled delays occur to buses when, for whatever reason, irregularities occur in the signal phases, and some traffic is given only a very short green time. A mechanism is needed that will detect that there is a bus in the traffic queue, and advance the green phase for this traffic to ensure that the bus can proceed through the intersection with a minimum of delay.

Concern is often raised in Councils about the damage caused to residential roads by heavy vehicles, including buses. The maximum axle loading for buses is less than the minimum construction standard for local roads, and buses are rarely full when traversing residential streets. Hence the axle loads are well below the maximum permissible forces on the road pavement. Buses are as necessary in residential streets as furniture vans and garbage trucks. Councils have to think very carefully about the practice of trying to prevent buses from using certain streets, and the adverse impact that this has on achieving sustainable transport services.

Public transport standards applied to traffic management projects would include:

- Bus stops are located at the optimal position for pedestrian movement and safety
- Bus stop and taxi rank locations take precedence over allocation of space for car parking and vehicle movement
- Pedestrian refuges are placed to allow safe crossing at bus stops
- Traffic management plans do not disadvantage the efficiency of bus routes
    - ◊ Where possible, stop signs are not placed on roads used as district or trunk bus routes
    - ◊ Bus stops are usually placed close to intersections and connecting pathways to improve access from side streets
- Modifications to intersection designs are made to improve bus routes
- Traffic control facilities are provided at intersections to reduce delays to buses
- The location and length of bus zones is reviewed and modified where appropriate. In many cases a bus zone can be replaced with a bus stop giving more flexibility to the use of the kerb space.

It is unlikely that this task can be achieved satisfactorily without the involvement of, and input from, various Local Government agencies, including engineers, planners, social workers and community committees.

Local Government has a major input at Traffic Committees that determine traffic management matters. Based on observations about the decision-making processes of these committees, there needs to be a more formalised policy favouring public transport priorities in order to enable sustainable transport projects to succeed in achieving their objectives.

5.12 Accessibility

Those who may experience difficulty in physically accessing public transport include:

- ◊ those with mobility disabilities (both long and short-term)
- ◊ those with sensory and mental disorders
- ◊ parents with young children and strollers
- ◊ people carrying luggage
- ◊ people with a visual impairment
- ◊ people who have difficulty reading
- ◊ frail and aged people.

These groups may benefit from special facilities and supportive design. Examples of these design features include low-floor buses, grab rails, specialised information about the system for people with sight or hearing impairment, extendable ramps, wider aisles and more storage facilities. However, provision of these facilities takes up space at the expense of accommodating other people, unless dual usage designs are implemented.

Most buses provide priority seating for mobility-impaired people at the front of the bus for obvious convenience. However, this seating is sometimes difficult to access, and lacks some of the usual grip rails for passengers to hold on to.

Another feature of value would be a genuine focus on the needs of passengers and an education program to create awareness of needs among drivers. A requirement for drivers to assist people with mobility problems would be most beneficial in providing a user-friendly service. However, this has to be balanced against the safety aspects of the driver leaving his/her seat.

Accessibility considerations should not stop at the bus stop, railway station or ferry wharf, but should include accessible transport infrastructure, footpaths and buildings. It is absolutely essential that these are linked to residential and activity areas by formed pathways without steps. This broader sphere of accessible infrastructure may help people with disabilities overcome some of the barriers they face in being able to travel.

Some bus operators in the Lower Hunter have low floor buses which accommodate people with disabilities more easily. However, these buses are rotated between routes and therefore it is impossible for people to know when accessible buses will appear on their services. Although Newcastle Buses has 18 low-floor midi-buses in its fleet, they are not usually used on Saturdays so as to avoid overloading due to reduced frequencies and longer routes introduced in the March 2002 network review[36]. To this extent, accessible buses operated randomly throughout the network are not a very useful asset for people with restricted mobility.

5.13 Network Design

• Route Hierarchy

In reviewing the region's transport network, two crucial initial decisions have to be made:

- the degree of network integration that can be achieved with the various operators
- the type of network that is to be provided.

At present there is virtually no integration between the bus and train operators, and there is no hierarchy in the bus route structure. Route rationalisation, integration and segmentation could lead to greater efficiencies and higher patronage, as well as providing the opportunities to consider the suitability of other transport modes.

One of the major difficulties with public transport in the Lower Hunter is that it tries to cater for all types of travellers with the one system. As such, it doesn't perform as well as it could for any particular type of service.

To be effective, public transport routes have to combine two features which can sometimes be in conflict:

- the routes have to be direct, so as to minimise travel times;
- the routes have to be close to where people live, so as to make them easily accessible.

There should be three levels of hierarchy in a public transport network:

- Trunk routes offering direct links between transport nodes
- District routes that operate through residential areas as feeders to trunk routes at transport nodes
- Local routes which are designed primarily to meet the needs of people with transport difficulties, to operate on a demand-responsive basis, and to provide feeder services to district centres

The 'trunk and feeder' type of service is designed to overcome this problem by providing fast, direct services between major centres (trunk services) and local suburban services linking with the trunk services at interchanges (feeder services).

[36] Fleetline, August 2002, page 113

The route services can be operated by train, light rail, bus, APM and PRT systems. Trains and light rail would normally operate as trunk routes.

For Trunk and District Routes, the route should be as direct as the urban environment will allow. This would improve the competitive position of public transport against the perceived time advantage of car travel.

Greater utilisation could be achieved with the two Stockton ferries. It is conceivable that the route coverage could extend from Wickham to Honeysuckle, Queens Wharf, Stockton and North Stockton using the existing resources.

• Community Transport

Community buses can be considered for Local Routes and can continue to meet the travel needs of target groups of people with mobility impairments.

The existing 'community transport' services are restricted to a very limited group in the community who have specific disabilities. But there are much larger numbers of people who still wish to be mobile, who cannot go by car, who are still able to be independent, but who cannot comfortably handle conventional public transport.

These people need to be served by a form of community transport that operates at the neighbourhood level and is available to anyone who wants to use it. Normal fares would apply, and low-floor accessible buses would be used at all times. The buses would operate to a nominal timetable, but would have the flexibility to provide a door-to-door service for those unable to walk to the bus stop. These buses would take people to and from the district shopping centre, where transfer to the normal buses would be possible. It is envisaged that there would be a half-hourly service throughout the day, seven days a week.

This approach to community transport would go a long way to meeting the travel needs of senior citizens, who currently form the bulk of bus patronage. It would also enable other bus services (trunk and feeder services) to be designed with more direct routes and faster timetables to meet the travel needs of other segments in the potential public transport market, for whom the current public transport services are too slow and circuitous.

• New Transport Modes

A possible new system of public transport such as light rail may need to be introduced to create a sustainable transport network and to increase the number and proportion of journeys made by public transport. High urban density is often seen as an essential criterion for light rail, but this is more an excuse for opting out of the decision-making process. Light rail infrastructure should be justified and funded in the same way as road infrastructure, i.e. on the basis of its environmental, economic and social benefits. It is the percentage of trips made by public transport, rather than the urban density per se, which determines the economics of light rail options.

Based on indicative cost data, it is likely that, in the Lower Hunter where there are no major topographical constraints, any of the fixed track systems (light rail, APM, PRT or busway) would be cheaper and more effective to build than widening or building a new road as a means of easing traffic congestion and increasing traffic capacity.

• Urban Design

It is often difficult for bus routes to proceed smoothly from one suburb to another because of the layout of the road system.

When Local Government is involved with the planning of bus routes, they can supply valuable information on residential patterns and can address problems with the road system that may mitigate against efficient routes. It is absolutely crucial that Councils do not approve subdivisions with an isolated road network, usually with only one access point. The new road system must link through to adjoining development in order to allow buses to pass through the estate.

5.14 Fare Structures

• Fare Levels

Public transport should be priced at an affordable level. The real challenge is to make public transport 'affordable' for those in the potential growth market, many of whom would have to pay 'full fare' for their travel. There is not much awareness of what the 'affordable' or 'acceptable' fare level is for this sector of the market.

Fares tend to be set in relation to the costs of providing services rather than what the market will bear. Two separate processes are used: one for government services and one for private buses and taxis, although both processes are now managed by the Independent Pricing and Regulatory Tribunal.

It would be more appropriate to concentrate on the total patronage that an operator could achieve in a sustainable transport system, and then establish fare packages that will attract this patronage and achieve total revenue targets. This would give the opportunity for marketing initiatives such as special fare deals, loyalty packages, and group travel discounts.

There are vast differences in the fares that apply to people travelling in the Lower Hunter on the government trains, buses and ferries, and on various private buses. According to the Transport NSW website, it is necessary to contact each private bus company separately to find out their fares.

State Transit publishes a Newcastle Ticketing Guide which gives details of its fares and tickets. It is not as readily available as its timetable brochures at information centres, and a simple and effective opportunity to promote public transport is being missed. There are no information brochures on CityRail fares in the Hunter (other than the multi-mode tickets in the State Transit brochure), or on the private bus fare systems.

Fares for travel by public transport in the Lower Hunter are roughly twice as high as travel over the similar distance by rail in Sydney. This is due partly to the lack of rail services and to the lack of integrated fares between rail and bus. Comparisons of the costs of travel between Cessnock and Newcastle, and between Richmond and Sydney (both 60km) illustrate this point.

Table 12: Comparative Fares for 60km: Hunter and Sydney Regions August 2002

Mode	Trip	Adult Single	Adult Weekly
Rover Coaches	Cessnock - Maitland	$7.60	$53.20
CityRail	Maitland - Newcastle	$4.40	$32.00
Bus + Train	Cessnock - Maitland	$12.00	$85.20
Rover Coaches	Cessnock - Newcastle	$10.60	$63.60
CityRail	Richmond - Sydney	$6.60	$43.00

There are only 5 trips on weekdays and 2 on Saturdays between Cessnock and Newcastle by bus, whereas with the bus + train combination via Maitland there is a half-hourly service in peak hours, hourly on Weekdays off-peak and Saturday mornings, and 2-hourly on Saturday afternoons and Sundays.

These discrepancies in fare systems lead to vast inequalities in transport costs depending solely on where people live. They make the task of promoting public transport usage very difficult. They give people easy excuses for making alternative arrangements.

• Fare Systems

Fares and ticketing systems should be easy to understand. Newcastle Buses has probably the simplest fare system in Australia, with no complications or exclusions. Travellers have unlimited travel over the network for the time period that they pay for: 1 hour, 4 hours or all day. However, there has not been effective integration with the Stockton Ferry, with the trains, or with the private buses.

The minimum fares on Newcastle Buses are now the highest in Australia for short distance single-trip travel, thereby negating some of the benefits of this initiative. There needs to be a re-arrangement of the time-bands to provide for short-distance travel at the industry-standard fare of around $1.50.

The State Government has undertaken to introduce integrated ticketing throughout Newcastle, Sydney and Wollongong by 2003. At this stage, integrated ticketing will not include integrated fares, and the full fare values will be deducted from the integrated ticket each time it is used. Usually, integrated ticketing provides a discount for travel throughout the network compared to the sum of the individual fares. There is no other public transport system in Australia that has approached integrated ticketing and fares in the same way as NSW.

• Multi-Trip and Multi-Modal Travel

Travellers who have to catch more than one bus or a bus and a train are treated differently depending on where they live and which mode or operator they travel with.

- Newcastle Buses offers transfers between its buses on the time-based tickets (1-hour and 4-hour) and between buses and the Stockton ferry on the all-day ticket.
- Newcastle Buses offers ten 1-hour trips (including transfers) on its TimeTen ticket
- Port Stephens Coaches offers a Bay Day Rover ticket for all-day travel on its services
- Toronto Buses and Sugar Valley Coachlines allow through fares on their services which connect at Glendale Supercentre
- Periodical tickets (7-day, 3-month or yearly TravelPass) are available on Newcastle Buses and Ferries, and on CityRail trains.
- Combined TravelPass tickets are available for travel on Newcastle Buses and Ferries and CityRail trains between Telarah, Newcastle and Awaba.
- Pensioners and senior citizens can buy an all-day ticket to travel on government trains, buses and ferries throughout the Hunter Region. Another ticket allows all-day travel to Sydney, Blue Mountains, Southern Highlands and Illawarra. These tickets are very popular.

Multi-trip and multi-modal tickets are limited to these specific situations. What is missing is a ticket which allows travel throughout the region irrespective of who operates the service.

The prices for the government multi-modal tickets in Newcastle are based on tickets of the same colour in Sydney, even though the area covered and the number of available services in the Newcastle / Lake Macquarie area are much smaller than in Sydney.

There seems to be no reason why an all-day bus and train ticket could not be made available for students and adults for combined bus and train travel, as it is in Sydney, but at a lower price[37].

[37] The DayTripper ticket is available for travel on trains in the Sydney suburban area, and on all normal State Transit buses and ferries. It is sold on the buses and at railway stations, ferry wharves and information kiosks.

- **Concession Fares**

There is a long-standing community expectation that fare concessions are available for those regarded as economically disadvantaged, namely the unemployed, low income earners, students, elderly and youth. Half fare concessions apply for these people on all public transport services, and the State Government pays for the concession granted so that the operator earns the equivalent of a full fare.

Pensioners and senior citizens can buy a single ticket for all day travel on the government buses and trains, but have to pay half fare per boarding on the private buses.

It is important to remove anomalies between concession fares charged by private and government public transport providers. It is hard to understand how a pensioner living in Edgeworth, Maitland, Cessnock or Tanilba Bay can 'afford' to pay a higher fare (because the locality is served by a private bus company) than a pensioner living in Merewether (served by government buses).

5.15 Revenue Collection

When viewed from the perspective of operational efficiency, collecting fares on buses is counter-productive to the objective of encouraging more people to use public transport. The time taken to collect fares, answer passenger fare inquiries, handle change and manage ticket systems adds about 20% to the running time for a trip. Without collecting fares, a bus trip from Newcastle to University could be reduced from 37 to 29 minutes, from Swansea to Newcastle the time reduction would be at least 15 minutes.

When looked at objectively, the revenue collected each year by bus operators in Newcastle / Lake Macquarie amounts to about $50 per head of population[38]. If this revenue could be collected in a more efficient manner, bus services would become much more effective, and would attract a significantly larger number of passengers.

Increased use of public transport benefits everyone in the community, not just bus travellers. When people replace car trips with trips by public transport, there is less pollution in the air, and less congestion on the road. Both buses and other cars can travel faster. Everyone benefits, so it is not unreasonable that everyone contributes to the cost. One of the inequitable aspects about public transport is that the people who use it have to pay, while those who travel by car get access to benefits like free parking at shopping centres and free commuter car parks at railway stations.

In a region such as the Lower Hunter, it would not be unreasonable to consider an innovative scheme whereby the cost of public transport was charged against the whole community, rather than actual users. People entitled to concessions would still benefit from the concession contribution made by the government. Each passenger boarding would still have to be registered electronically as an auditable basis for payment to the bus operators.

The benefits of an alternative method of revenue collection, at least in a regional area, are so great in the context of sustainability that they should be seriously investigated and trialed.

[38] Based on indicative analysis of financial information published by State Transit, 2001

Break-even buses not enough

A more efficient bus system doesn't mean public transport users will be the winners writes, **Bruce R. McFarling.**

DURING the discussion of the revised Newcastle bus route system that came into effect this week, the suggestion was made that an efficient public transport system should break even.

The Sydney bus system was pointed out as an example.

Against this measuring rod, the Newcastle bus system falls short, with revenues covering only two-thirds of costs.

Using break-even as a measuring rod is sometimes laid at the feet of 'economic rationalism', with the idea that the most efficient system is a user-pays system.

I am not an economic rationalist, but I feel compelled to point out that this is not economic rationalism.

A consistent economic rationalist would call a public transport system grossly inefficient if it is run on a break-even basis.

The reason comes down to benefits of public transport that are not actually experienced by the users of public transport.

For example, when someone takes public transport into a heavy traffic area, traffic and parking problems are reduced. Only drivers receive these benefits.

The user of lower traffic congestion and reduced competition for parking are drivers, so 'user-pays' says that drivers should pay for this benefit.

If they do not, there is too much driving, too little use of public transport, resulting in too much traffic congestion, which is a sign of economic inefficiency.

As another example, pollution per public transport user is normally lower even with conventional fuels like petrol and diesel.

In addition, it is easier to shift public transport to low and zero emission vehicles.

In this example, 'user pays' says everyone who breathes should help pay for this benefit, and we should all pay more if the public transport relies on low or zero emission vehicles.

Otherwise, there is too much driving and not enough use of public transport, resulting in too much air pollution, which is a sign of economic inefficiency.

Economic rationalism won't pick out all the problems with the break-even approach to public transport.

Simply consider that one in 10 Australians live in the western half of Sydney, but Parramatta is the end of the line for Sydney public buses.

If that strikes you as unfair, you can see something economic rationalism will probably miss.

However, economic rationalism can tell us a lot about efficiency, and it says that the break-even approach to public transport is inefficient.

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5.16 Safety

Travel by public transport is inherently safer than travelling by any other mode. However, there are some aspects of public transport which encounter particular traits of anti-social behaviour and thereby threaten personal safety. Unfortunately, there has been an over-emphasis on some of the problems associated with public transport travel without due recognition of the overall benefits.

There are several ways in which these safety considerations can be handled:

- increase patronage on night-time services
- restructure routes so that patronage is more concentrated on the services provided
- improve lighting at bus stops, around railway stations, and along streets and footpaths
- place bus stops at centres of activity
- make greater use of the 'hail and ride' concept, where people can get off buses close to their destination
- provide direct links between trains, buses and taxis
- ensure there are effective and rapid response communication systems
- replace undue emphasis on fear and safety issues in the media with more positive reporting about public transport.

The growing concerns about personal safety, especially at night time, have resulted in surveillance systems being introduced on public transport. This may have unwittingly contributed to a decline in public transport usage, in that it raised awareness of the risks associated with this form of travel. There have been some attempts to modify service delivery at night times, but not sufficiently to address community concerns. This is a matter which perhaps needs more sensitivity than it has been given to date.

Some cities have adopted special transport services to make it safer for people to get home in the early hours of the morning. These services usually operate at fixed intervals from designated locations. The bus stops are especially located in well-lit areas, mostly near 24-hour convenience centres. In some cases, buses are fitted with a mobile phone that can be used by the passenger to phone ahead to arrange to be met by a relative or friend, or for a taxi.

5.17 Myths about Public Transport

There are many commonly held myths about public transport that need to be gradually dispelled if public transport is to become more readily accepted as an effective component of urban management.[39] These myths can take various forms, but for the purposes of this Paper they are presented this way:

- Only government-operated services are public transport
- Public transport is only for the poor and the disadvantaged
- Public transport has to be subsidised
- Public transport cannot really be improved
- Public transport cannot compete with private transport
- Buses are the best form of public transport because of their flexibility
- Public transport is in an irreversible decline.

5.17.1 Myth 1: Only government-operated services are 'Public Transport'

It is important to state clearly what is meant by 'public transport'. Although the meaning of this term is reasonably consistent in printed reports, it appears to have many different meanings in general conversation.

An official definition of public transport[40] is:

> *Transport service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point to another. Routes and schedules may be predetermined by the operator or may be determined through a cooperative arrangement*

This description of public transport relates to those forms of land transportation that are provided for anyone to use, provided they conform to basic behavioural standards. In this context, it includes conventional trains, buses, trams (light rail), ferries, taxis and hire cars, irrespective of whether it is a government service, a private business, or a contract operation.

Related forms of transport such as community buses are generally regarded as being outside the core description of public transport mainly because their clientele is determined by some form of eligibility criteria. In this context it is sometimes referred to as 'paratransit'. However, community buses where scheduled services are planned and provided with assistance from community groups do fall into the description of public transport.

Because of the significant differences in service standards between various forms of operation, the term 'public transport' is sometimes used to indicate 'government' operations as against private sector services. When people say 'there is no public transport where I live', they often appear to mean that there are no government buses in their area. Sometimes they mean that there are no trains in their area, ignoring the existence of buses. The term 'private buses' to describe the public transport services operated by private companies adds to the confusion.

In this Issues Paper, the broad meaning of 'public transport' is used, viz. all services by all modes, irrespective of the operating regime.

[39] For a more detailed treatise on myths in public transport, refer to *Transportation for Livable Cities* by Vukan Vuchic, Center for Urban Policy Research, 2000

[40] *Urban Public Transportation Glossary*, Transportation Research Board, Washington DC, 1989

5.17.2 Myth 2: Public transport is for the disadvantaged

Public transport is meant to be an alternative travel mode that anyone can choose to use. It is unfortunate that in a situation like the Lower Hunter, an impression is gained that the majority of users come from 'disadvantaged' groups. This is a commentary more on the fact that the system is not sufficiently attractive to other groups in the community.

A concerted campaign is required to market public transport to a broad range of community groups and to design services to meet their needs. If this was done, there would be a greater mix of people using the system, and the 'disadvantaged' image would disappear.

5.17.3 Myth 3: Public transport has to be subsidised

'Subsidy' for public transport is often an emotive issue which is compounded by a lack of clarity of what constitutes subsidy.

At one extreme, 'subsidy' is seen as any funds paid to public transport operators by the government for any reason. In this context, 'subsidy' would include payment by government for concession fares (including school travel) which are granted in accord with government social policy. It is essential that the operator receives these funds, as they replace the fares that would have been paid by the passenger if concessions were not available. As such, they are not really a 'subsidy', and are not regarded as such in this Issues Paper.

Quite often when political comments are made about the need to retain funding for public transport, it is these 'social policy' payments that are being referred to.

At the other extreme, 'subsidy' is taken to mean the funding of infrastructure to enable the public transport services to operate efficiently. This is seen as a legitimate role for government, and in fact an essential one. It enables the services of various operators in several modes to be integrated efficiently. It is no different to the provision of infrastructure for the operation of other modes of transport, such as ports, roads, bridges, traffic control measures, cycleways, and signage. As such, this funding should not be regarded as a 'subsidy' to public transport.

It is the middle ground that is open for debate. In addition to the funding for concession fares and infrastructure, there is usually a government payment to support a level of service that is deemed to be above the level which fares can support at established patronage levels. This is a complex issue that is outside the role of this Issues Paper to debate.

However, the simple diagnostic is that if services are operated more efficiently and effectively, they would attract more patronage without necessarily increasing costs.

- 'Efficient' operations relates to the way in which the services are provided by the operator
- 'Effective' services relate to how they meet the needs of the community

Generally speaking,

- government services need to become more efficient, and use their funding resources to deliver better services
- privately-operated services need to be become more effective, so as to generate more revenue through greater use of more attractive services.

In this context, it can be said that public transport should not need an operational subsidy. Operations costs can be covered by fare revenue if a larger proportion of daily trips are made by public transport. There is sufficient capacity in the public transport systems for these extra trips using existing resources. The target market share has to be achieved by converting 15% of current trips from car-based modes to public transport modes.

This 'modal split' or market share to cover operational costs will be lower in regions like the Lower Hunter than in metropolitan centres because of lower cost elements in regional areas.

When people say things like 'public transport can never be profitable' they are referring more to the current context rather than what would apply if sustainability principles were applied. Only marginal costs are involved with increasing service frequencies, given that most of the resources are already available for peak and school services. Increased frequencies will attract more patronage on all services (including existing ones), thereby generating revenue greater than the additional marginal costs of operation. As this process is reiterated, the gap between total costs and total revenue closes, until the need for operational subsidy is removed when about 20% of total trips are made by public transport.

A point will be reached when additional capital resources will be needed during peak hours, and this is expensive. A properly integrated transport system aims to even out the peaks, and ensure that high capacity vehicles are used at these times. In the Hunter for example, greater use can be made of trains instead of buses to transport large numbers of school students, and a community-based cycleway strategy would enable many more students to cycle to school rather than catching buses.

A recent study by Tourism Victoria showed that the re-introduction of trams in Ballarat would produce a profitable operation[41]. Specific funding for the infrastructure would be needed, just as it is for any new road or bridge. The regional economic benefit (including tourism) would justify this funding. This is an example of a holistic approach to public transport provision.

5.17.4 Myth 4: Public transport cannot really be improved

Public transport will only be improved if there is a consistent broad based commitment to do so. To date, this has not really been the case, despite many plans and programs with good intentions. The problem is not a simple one, and it has been made more complex by the passage of time. Basically, it stems from:

- institutional factors in the public transport industry
- a cultural mindset that says that the market share for public transport travel cannot be increased
- a funding regime that discourages innovation and growth
- a discordant division of responsibility between government agencies
- a competitive rather than collaborative business approach by various operators
- a lack of marketing to keep pace with the promotional efforts of other modes
- a lack of recognition of the travel markets that are best attuned to public transport usage.

If this inertia can be overcome, opportunities for public transport improvements will be realised. This is already occurring in some of the government-sponsored privatisation programs in selected cities throughout Australia, although privatisation is not necessarily a pre-condition for this to occur.

5.17.5 Myth 5: Public transport cannot compete with private transport

There is a common misconception that 'everyone has a car', and therefore there is little need for public transport. This is usually perpetrated by those who travel by car all the time, and by public transport operators who are not keen to expand their business.

As shown in the Community Profiles (Vol 2, §2.5, Tables 6 - 9), the number of urban households with no car varies from:

[41] ABC Radio News, Bendigo, 25 May 2000

- ◊ in Newcastle / Lake Macquarie: around 2% in Eleebana to over 31% in Carrington and Maryville (Throsby)
- ◊ in Cessnock: from 5% in Heddon Greta to over 16% in Cessnock South
- ◊ in Maitland: from under 5% in Thornton to over 19% in East Maitland
- ◊ in Port Stephens: from 2% in Medowie to nearly 14% in Nelson Bay.

When the only car in one-car households is in use, other members of this household probably do not have access to a car. The number of households with no more than one car varies from 29% in Eleebana to 76% in Mayfield. It is these households that hold the greatest market potential for public transport. The range is not as great in Cessnock, Maitland and Port Stephens.

It is true, that for some people, perhaps 40% of the population[42], public transport is not seen as an acceptable travel alternative, and for these people public transport cannot compete with their own private transport. But it shouldn't follow that these people can project their travel preferences on the rest of the community. The rest of the community may be prepared to consider public transport for some of their trips, and indeed in many cases, public transport would be the first choice travel mode if it was sufficiently attractive to meet their travel needs.

Use of public transport is not an absolute 'either - or' choice. In cities where public transport usage is high, household car ownership levels are similar to those in the Lower Hunter. However, the car is used for only some of the household's trips, and public transport is used for other trips[43]. This contrasts with the common attitude here that once you have a car, you have to use it all the time. In fact, research by Transport NSW has shown households with higher car ownership also travel the highest number of kilometres per car.

Where good public transport is available, and the costs can be packaged effectively, many people would choose to use it to travel to and from work, rather than travel in their own car, which, for most workers, stands idle all day long. This is a very inefficient use of financial resources if looked at objectively. (See cost comparisons in Vol 1, §2.4)

The photo below was taken in October 2001 at 4pm on a Wednesday in Jesmond, a residential suburb of Newcastle in Britain. It shows a typical residential street full of parked cars. The workers in these houses have not taken their cars to work (but they still have cars). They have travelled on the nearby Metro rail system, which operates to the City Centre and several employment areas every 7½ minutes in peak hours, every 10 minutes during the day and every 15 minutes at night, between 6am and midnight every day. The regional road system is good, but the Metro provides a convenient alternative. The historic City Centre has been able to retain its heritage characteristics and provides only limited parking. It has survived as a thriving regional centre despite the development of the largest regional shopping centre on one site in Europe at Gateshead, 7km from the City Centre.

[42] Research by NRMA for Clean Air 2000 Campaign

[43] Refer for example to Research Reports available from UK Commission for Integrated Transport on website <www.cfit.gov.au>

5.17.6 Myth 6: Buses are the best form of public transport because of their flexibility

It is the very flexibility of buses that detracts from their patronage potential.

Throughout the world it has been shown, that for the same transport task, a tracked system will achieve a higher modal split to public transport than a road-based bus system. Tracked systems includes both and rail and guidance systems. There are several factors contributing to this situation, as shown in Table 13.

Table 13: Modal Split Benefits of Tracked and Road-based Public Transport Systems

Tracked Systems	Road-based Systems
Travellers know exactly where the 'route' is.	There is no easy way to ascertain which way it will go, and which bus is best for a particular travel need.
There are usually clearly defined 'stops' or stations where travellers can interact with the network.	Bus stops can be anywhere, and one has to find the road used by a particular route, then find the bus stop, which may not be very clearly marked.
There are usually feeder buses through local streets that can take people to the local station.	The long distance services also provide the local service, usually at a much lower frequency than feeder buses.
People will readily accept transferring from a feeder bus to a 'better' mode of transport (such as a tracked system).	People are reluctant to accept changing between two buses of the same kind.
Intermodal interchanges are specifically constructed to encourage modal transfers. They include a range of passenger convenience facilities. Timetables and ticketing are usually integrated.	Bus-bus transfers are often a hit and miss affair on the side of the road, with poor passenger facilities and lack of coordination.
Vehicles are not delayed by road congestion. They provide faster transit times that can be achieved by private car.	Vehicles are adversely affected by traffic congestion, even with transit lanes and bus priority at intersections.
Usually have ticketing systems that do not involve the vehicle driver.	Usually delayed at bus stops as passengers pay their fare.
Transit corridor generates transit-oriented development due to the permanency of the transit system	No development opportunies are created due to the lack of permanancy of the route

Tracked systems can usually be operated with lower pollution emissions than on-road buses, and with lower staff numbers per passenger carried.

Studies undertaken in similar areas in the New Jersey suburbs of Philadelphia (USA) show that a single 22km rail line attracts a daily patronage of 40000 people, whereas 17 bus routes with a network of 904km attracts only 30000 travellers[44].

The infrastructure costs for tracked systems are higher than for road systems, but this has to be viewed in the context of the benefits: an alternative transport corridor that is free from congestion, can carry 10-20 times more people per 'lane' with minimal environmental impact, and with certainty of travel patterns. Tracked systems infrastructure costs are cheaper than providing the same capacity in a new road-based system.

Although some politicians and academics see buses and busways as the future public transport mode, this is not supported by recent research[45]. New light rail projects have been very successful in creating new residential development along transit corridors, a trend which has not occurred with bus projects.

[44] *Transportation for Livable Cities*, Vukan Vuchic, Centre for Urban Policy Research, 1999, page 210

[45] *Turning the tables on anti-tram 'experts'* Prof C Hass-Klau, Tramways & Urban Transit, Dec 2002, p 456

This subject is treated in more detail in a recent international research report which assessed the attractiveness of light rail relative to modern bus alternatives ranging from guided bus through busways to bus lanes. The report includes analyses of surveys with 1800 British car drivers on their attitudes to local public transport and what improvements they would most like to see, and reports on the evidence on car-to-public transport switching[46].

The authors of the research report conclude that the differences in infrastructure costs between light rail and modern bus alternatives are quite narrow. Contrasts in tram and bus vehicle costs dominate the picture. The relative success of both systems is crucially affected by the level of complementary measures supporting them, and the degree of political commitment behind them.

The busway system in Ottawa Canada has been used as the rationale for the new busway systems in Brisbane and Western Sydney. However, care is needed that the short-term perceived benefits of busways do not cloud the long-term objectivity of sustainable transport systems, as indicated in this extract from a review of the system in Ottawa[47].

> Public transit as a municipal endeavour should be a commitment to its residents. This commitment, when translated as permanent infrastructure and a reliable system, generates a confidence in the system that reflects directly and evidently on how it is used.
>
> A city's public transport system can and should be a powerful planning and development tool that steers growth instead of merely addressing needs as they arise. In many major cities, people can confidently choose where to live based on permanent regular mass transit lines.
>
> Ottawa's present bus system is a bit of a lukewarm commitment based on changeable routes with buses going in and out of the Transitway where ever needed. While it is a good system that is incredibly flexible, it basically hyper-services a corridor while not being particularly efficient in servicing people who actually live and work along that corridor, because the transitway is merely a bunching of numerous bus routes instead of being a true high capacity rapid transit system.
>
> In rush hour, half of the buses can often go by virtually empty, while the other half cannot take any more passengers. The argument that the "customised routes" save passengers time from transfers is lost in the fact that so much time is spent waiting for the right bus to come along.

5.17.7 Myth 7: Public Transport is in an Irreversible Decline

> *This text is edited from MEDIA RELEASE issued on 29 NOVEMBER 1999 by People for Public Transport and Rail 2000 in Adelaide. It summarises many of the sustainable transport issues that are relevant to the Lower Hunter. 50 years ago the population of Adelaide was the same as current population of the Lower Hunter.*
>
> "Major cities both overseas and in Australia are showing Adelaide how we should be reviving our public transport and bringing new life to the Adelaide City Centre," Margaret Dingle of People for Public Transport and Frank Lander of Rail 2000 said in a joint media release.
>
> They were responding to an article in the *Advertiser* (19/11/99) reviewing the Adelaide Passenger Transport Board's annual report. It stated that western countries are generally experiencing decline in urban public transport use with the implication that Adelaide's decline was also inevitable.
>
> "However, they have missed the key point that cities which have made a commitment to rail-based transport have almost without exception recorded significant increases," said Mr Lander. "Worldwide, both light rail (tram) systems and conventional trains have shown that they do get people out of cars. Buses and busways do not."
>
> The evidence is that rail public transport use is increasing, not only in compact European cities, but also in the traditionally car dominated United States and Canada. In the late 1960s there were only 9 US cities with rail systems, today there are 25 and this number is increasing.

[46] *Bus or Light Rail: Making the Right Choice. A Financial, Operational and Demand Comparison of Light Rail, Guided Buses, Busways and Bus Lanes* Carmen Hass-Klau et al, Environmental and Transport Planning, 2000

[47] *Making Sense of Public Mass Transit in Ottawa-Carleton: Looking beyond the Transitway and the Light Rail Pilot Project* G. Gobuyan, 5th Edition, 1998

St Louis is just one success story. Daily patronage on its new 29km light rail system was expected to be 17,000 in the first year, but was actually 30,000. It now exceeds 42,000.

"Changing long term transport trends doesn't just happen," said Mrs Dingle. "In every successful instance, there has been a long term vision. It takes strong political leadership to invest in sustainable transport systems rather than to continue pouring money into roads.

"We can see this by comparing Toronto and Detroit, two cities close together and of similar size. Toronto for several decades has built up its rail systems whereas Detroit, like Adelaide, has allowed private car usage to grow unchecked. **The result is that now that Metro Toronto has 24% of travel on public transport, Detroit has 1%.**

Some of the best examples are actually in Australia. The Perth suburban rail system by the late 1980s was more run down than Adelaide's and had lower patronage. The WA Government was considering replacing it with buses and building an Adelaide style O-Bahn for the northern suburbs.

But instead of the bus option, Perth rehabilitated and extended its rail system. It reopened lines and invested in modern electric trains and people-friendly stations. Significantly, the O-Bahn plan was scrapped in favour of a new railway to the northern suburbs.

"The results are impressive," said Mrs Dingle. "Perth's suburban rail patronage increased from 8 million in 1991 to 29 million in 1997. That's an increase of 260%."

This outstanding achievement took political leadership from the start. The critics were predicating that rail would attract even less passengers than the existing express buses because people would not transfer from a bus to a train at interchange stations. They also predicted that the railway would not get cars off the adjacent freeway, that people wouldn't leave their cars for the buses, and that the rail system would be a financial disaster.

The critics were wrong on all counts. Within a few years, nearly 60% more people were using the new railway than had been using the express buses, and a high portion of these were motorists who stopped using their cars on the freeway. The railway is also covering operating costs.

Another case study is Melbourne. The four new private operators of the train and tram systems have committed around $1 billion for new rolling stock and station improvements. With Government subsidies reducing by up to 80%, the franchisees need to increase passenger numbers by 50-80% in order to sustain this massive investment.

"Put simply, if the new private operators do not deliver on their promises, they will go broke", Mr Lander stated. "Traditional railways have been government departments focusing on cutting costs and slashing services. The new Melbourne train and tram operators must focus on growing their business and revenue by providing value for money service.

People for Public Transport and Rail 2000 say that it is now time for the SA Government to show decisive leadership and action.

Firstly, we must acknowledge that Adelaide's addiction to road building projects is not the answer. "Big ticket items like the Southern Expressway do not *solve* the problem," said Mrs Dingle. "*They lock us into the problem."*

Secondly, we must adopt long term strategies that integrate urban planning with sustainable transport. The two foundations of an effective transport system will be a revitalised, people-friendly rail service and an extended light rail (tram) network. Feeder buses and secure parking at attractive interchange stations will enhance the effectiveness of these rail systems.

Rail 2000 and People for Public Transport acknowledge that in the present climate it is difficult to fund capital works in SA. However, Melbourne has shown us how to attract substantial private-sector funding with a guarantee of increased public transport use.

This would help to revitalise the Adelaide City Centre and it will cut down on road congestion, accidents and pollution. And as another bonus, our cost minded Government would save money on increasing road capacity and subsidising our existing bus, train and tram system.

"Progressive OECD cities have been turning to rail-based public transport to revitalise their declining city centres for many years now. How long will it take Adelaide to follow?"

Real life experiences using Public Transport in the Lower Hunter

This is an edited version of a report on a recent trip by public transport from Cessnock to Newcastle on a Sunday and from Newcastle to Sydney the next day (Monday). It is intended to show the extent of issues which have to be addressed if public transport is to provide an alternative means of travel in a sustainable transport system. It demonstrates that while individual operators may each be attempting to provide basic services, the lack of coordination and integration produces an unacceptable travel option.

On Sunday I intended to travel by the 12.00noon Rover Coaches bus from Cessnock to Maitland, due there at 12.43pm for a hopeful connection onto the 12.47pm train to Newcastle. Rover do not advertise this as a connection, instead listing the next train from Maitland at 2.05pm as the connection. I wonder what is the point of running a 2 hourly Sunday bus service that is not scheduled to meet the train from Maitland to Newcastle?

There are a number of bus stops in Vincent Street Cessnock, some of which have timetable displays. Others have display boxes with the information sheets missing, in some cases the sheets are in shop windows instead, others seem to have nothing at all. Those that are well signed have one problem - in most cases the displays on BOTH sides of the road have times listed for buses in BOTH directions, so there is nothing to tell you which side of the road to wait on.

I punted correctly and chose the right side and waited at the northern end of Vincent Street. By the time the 12.00 bus picked me up it was about 12.08 by my watch. I did notice some roadworks at the southern end of Vincent Street as part of Cessnock's main street upgrading, and this may have partly accounted for the bus starting its journey late.

Despite light loading we had no chance of arriving at Maitland at our scheduled time of 12.43 and in fact pulled up at 12.48 just to see the doors closing on the 2 car Endeavour departing Maitland for Newcastle. I don't know why Rover runs such a deliberately tight (and therefore unreliable) connection onto the train. If the 12.00 bus had left Cessnock a few minutes earlier it would have a much better chance of meeting the train at Maitland.

Another angry passenger turned up at Maitland Station having been confused about how to get from Telarah as trackwork had resulted in trains short shunting at Maitland, but the station staff were quick to point out that the Endeavour had already been delayed awaiting the minibus shuttle coming down from Telarah.

Killing over an hour on a Sunday in a hot deserted Maitland is not exactly my idea of fun.

I occupied some time talking to the Blue Ribbon driver operating the Sunday On Call bus. For some years Blue Ribbon have provided all Sunday "services" by an On call bus instead of a scheduled service. You used to ring the mobile phone number of the driver to make a booking, but due to an industrial dispute drivers are now refusing this duty and so you have to prebook by Friday afternoon. The driver told me patronage has dropped significantly since the industrial dispute. Why Blue Ribbon does not divert the weekend phone to one of the managers in rotation (until the dispute is settled) puzzles me. When I saw him the Blue Ribbon driver was waiting for his 1pm booking from the Station. Apparently this was a regular booking who regularly did not turn up.

When I returned to the station, the Endeavour train from Newcastle came in and terminated, offloading Telarah passengers onto the minibus. This train then waited until almost 2.05 before shunting out to enable the Up Northern Tablelands XPT to approach. A coal train was allowed through Maitland and crossed over to the main line in front of the XPT. This was apparently due to trackwork on the Coal Roads. The XPT eventually left just behind the coal train and we followed. Not surprisingly we were constantly signal checked. The run for the XPT in particular must have been very frustrating. By the time we left Thornton we were 9 minutes late.

Approaching Warabrook I noticed that same coal train was being held for us to pass before it no doubt crossed over to travel to Kooragang, so why it had not followed both passenger trains from Maitland remains a mystery.

At Hamilton we had already delayed the Sydney electric train by several minutes, not that this would have mattered in the scheme of things with buses running Wyong - Hornsby and forecast delays of 50 minutes.

We eventually arrived Newcastle at 2.51, just under 3 hours after leaving Cessnock. You could drive all the way to Sydney in less time than that!

I noticed the Trackwork Poster from LAST week indicating that weekday off peak trains from Newcastle to Sydney were being disrupted by trackwork. Local Newcastle - Morisset suburban trains were being bussed and Sydney expresses were being made to stop all stations to Tuggerah. As I was planning to travel back on the next day (Monday), I asked the Newcastle ticket seller whether off peak trains from Newcastle to Sydney would be running normally the next day. He went away to check - 'yes' he assured me.

Tending not to believe anything that CityRail tells me, I tried to ring Newcastle Station on Monday morning but nobody answered the phone. So I rang Hamilton and asked if off peak trains to Sydney were running normally - 'yes' he assured me. Liars! They weren't - in fact the same trackwork disruptions were on again this week. So the 12.37pm train from Newcastle was due to make all of the extra stops at every station down to Tuggerah. I calculated this should have added 10 minutes, which indeed it did as we were 10 minutes late leaving Warnervale. Sadly though the delay was not confined to that, as we lost our path into the suburban area, arriving Hornsby 14 minutes late at 2.50 pm.

We must have caught up to a late all stations suburban because we were signal checked constantly and were 17 minutes late at Eastwood at 3.04pm. I had hoped to see the suburban train refuged at West Ryde but no such luck. Instead we passed a freight train on the refuge track instead, although it escapes me why it was not refuged at Thornleigh.

Thus we had another slow run on to Strathfield and we eventually reached Sydney Terminal at 3.33pm, 23 minutes late and almost 3 hours after leaving Newcastle.

The moral to the story is "Why would anybody travel by public transport"? The corollary being "Will travel by train in this State ever be 'normal' "?