STRATEGIC DIRECTION 3

INTEGRATED TRANSPORT FOR A CONNECTED CITY

Public transport network

CITY CONTEXT

Quality transport will be a major driver of sustainability in the City

Transport touches on almost every aspect of life in the City, providing access to the City's opportunities, economic activities and social interactions. Even in an increasingly 'wired' world efficient transport to face-to-face meetings is essential. Yet transport can also be a barrier to achieving sustainability outcomes.

As the centre of the Sydney Region, the City is greatly impacted by quality of transport. For it to function successfully and sustainably, the City's transport objectives need to be met inside the City's boundaries and across the Sydney Region.

The City of Sydney has a role in advocating, sharing and presenting a sustainable vision

The State Government is responsible for delivery of major transport elements in the City. The City of Sydney supports the State Government by advocating how government services can best meet the needs of the City and Inner Sydney, and by working collaboratively with all tiers of government to develop an integrated and sustainable transport system. The City of Sydney can present alternative visions for the City's future.

Heavy rail, metro rail, light rail, busways, buses, ferries, private cars, motorbikes, scooters, taxis, bicycles and pedestrians all have a role in the City

To achieve a world-class transport system, the City's different motorised transport modes (FIGURE 3.1) must be coordinated so their roles can be integrated and complementary.

City of Sydney

Hyde Park and St Mary's Cathedral

Sustainable Sydney 2030 adopts the following transport principles.

- Transport must be integrated with land use to reduce unnecessary travel in the City.
- The provision of varying transport modes must match the requirements and travel intentions of users.
- The role of motor vehicles for access to, and travel within, the City should be reduced to ease congestion and improve sustainable outcomes.
- Sustainable transport modes that meet user needs should be the priority for policy, investment and service-provision decisions.
- The development of a multi-layered, well-integrated transport system must consider and understand the needs of different users.
- Transport modes and services must be integrated with other uses to create seamless and continuous access to opportunities.
- Transport planning should allow flexibility to cope with changes in demand and other external factors, while protecting sustainable transport options for the future.
- Transport infrastructure and services should be supported across governments with appropriate policies and practices.
- Transport should support improved health and wellbeing.

FIGURE 3.1
CHARACTERISTICS OF MOTORISED MODES

TRANSPORT MODE	ROLE	CAPACITY	INDICATIVE SPEED (URBAN ENVIRONMENT INCLUDING STOPS)	STOPPING PATTERN
Heavy rail	Long distance commuter links. Connections from regional Sydney to City Centre. Limited capacity during peak periods to serve Inner Sydney commuters. Low level of accessibility from street level.	High	40–60km/h	Express and All Stops; station spacing 3–10kms
Metro rail	Short to medium distances; high demand. High potential to service Inner Sydney corridors. Higher frequency and speed than heavy rail.	High	40–60km/h	Usually All Stops only; station spacing 1–5kms
Light rail/tram	Highly accessible mode for Inner City corridors. Segregation from traffic necessary. Most potential in high density active corridors. Low environmental impact. High level of safety and security.	Medium	30–40km/h	Usually All Stops only; station spacing 200–1,000m
Busway	Medium distance commuter links. Segregation from traffic necessary for high performance. High environmental impact unless low emitting vehicles used.	Medium	30–60km/h	Combination of trunk and feeder services; station spacing 500m to 2km
Bus	Several roles over short and medium distances. Highly flexible mode. Does not require new infrastructure. On-road priority measures necessary. High environmental impact unless low emitting vehicles used.	Low	20–30km/h	Combination of express and all stops; station spacing 200 to 500m

Transport to and within the City must be considered at the Sydney regional scale, the Inner Sydney scale, the City scale and the City Centre scale. Measures to improve transport in the City cannot displace problems to surrounding areas.

The City within the Sydney Region

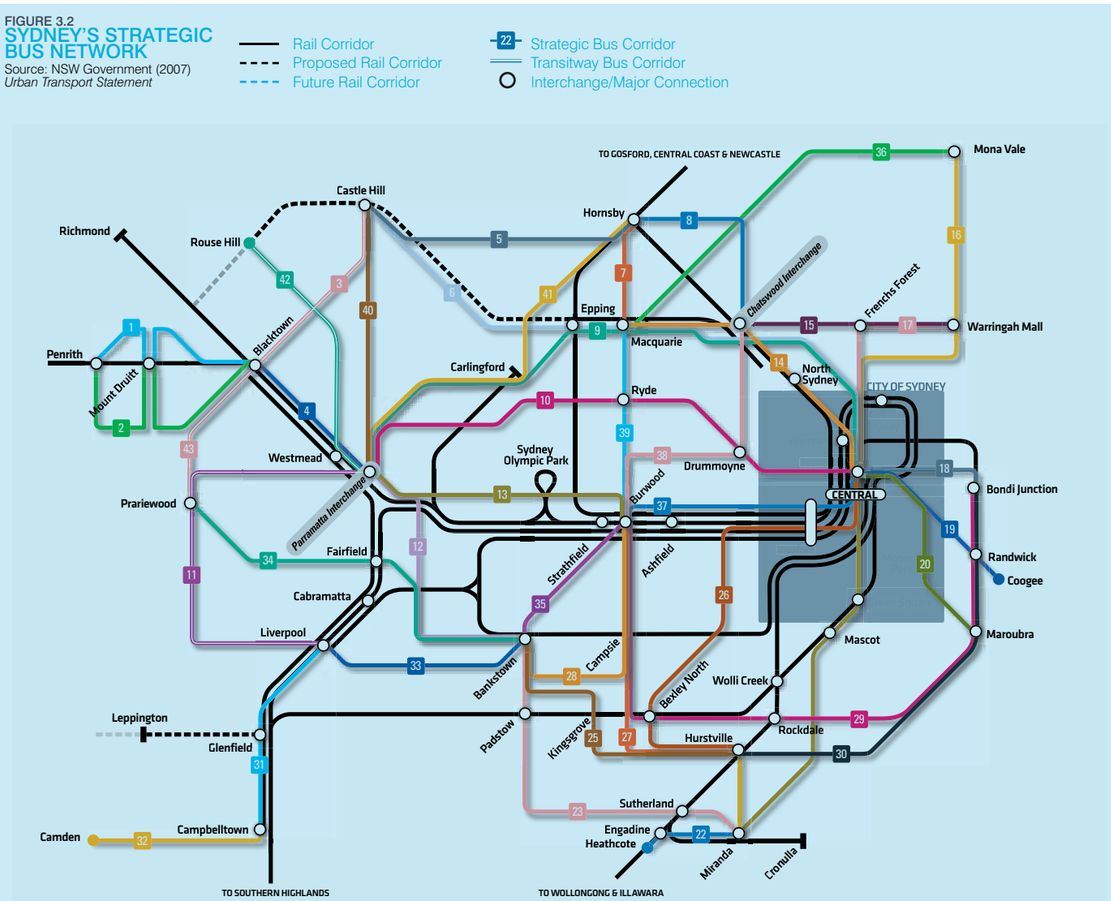
The City is impacted by State Government investment in public transport at a metropolitan scale. 'Business as usual', or incremental changes, will not meet the City's accessibility needs. Timely implementation of the State Government's plans for improved and expanded regional public transport systems could free-up road space for priority surface public transport modes such as buses and bicycles and deliver overall amenity improvements.

A more sustainable metropolitan transport system also requires greater management of transport demand, with greater attention given to reducing unnecessary travel and to supporting more sustainable modes.

The State Government must effectively manage both current and new systems to achieve maximum community benefit from public and private investments, and effective integration across all modes.

"Business as usual, or incremental changes, will not meet the City's accessibility needs."

FIGURE 3.2
SYDNEY'S STRATEGIC BUS NETWORK
Source: NSW Government (2007)
Urban Transport Statement



Currently anticipated regional infrastructure projects

The State Government has committed to or is considering a number of significant projects that will deliver increased capacity for travel into the City from the wider Sydney Region.

RAIL

- Rail Clearways program to improve rail system reliability and some increased capacity by 2010
- Completion of Epping to Chatswood Rail Line.
- 'Sydney Link' transport initiatives including North West Metro from St James to Rouse Hill and a possible West Metro, running between Parramatta and Circular Quay, with a future extension across the Harbour, and South East Metro extending from St James to Maroubra and Malabar.
- Development of the rail freight network to deliver increased capacity for container movements out of Port Botany

ROAD

- Planning and delivery of the M4 East extension, including possible extensions to Victoria Road and the Sydney Airport/Port Botany areas
- Widening of freeways in Western Sydney including sections of the M2, M4 and M5
- Various localised capacity improvements to support the orbital motorway network

BUS

- A network of 43 strategic bus corridors, including bus priority measures
- Victoria Road traffic improvements, including new bus lanes
- CBD Bus Strategy

WALKING AND CYCLING

- Further development of the regional cycle network with emphasis on off-road facilities

Source: Urban Transport Statement, NSW Government, 2006

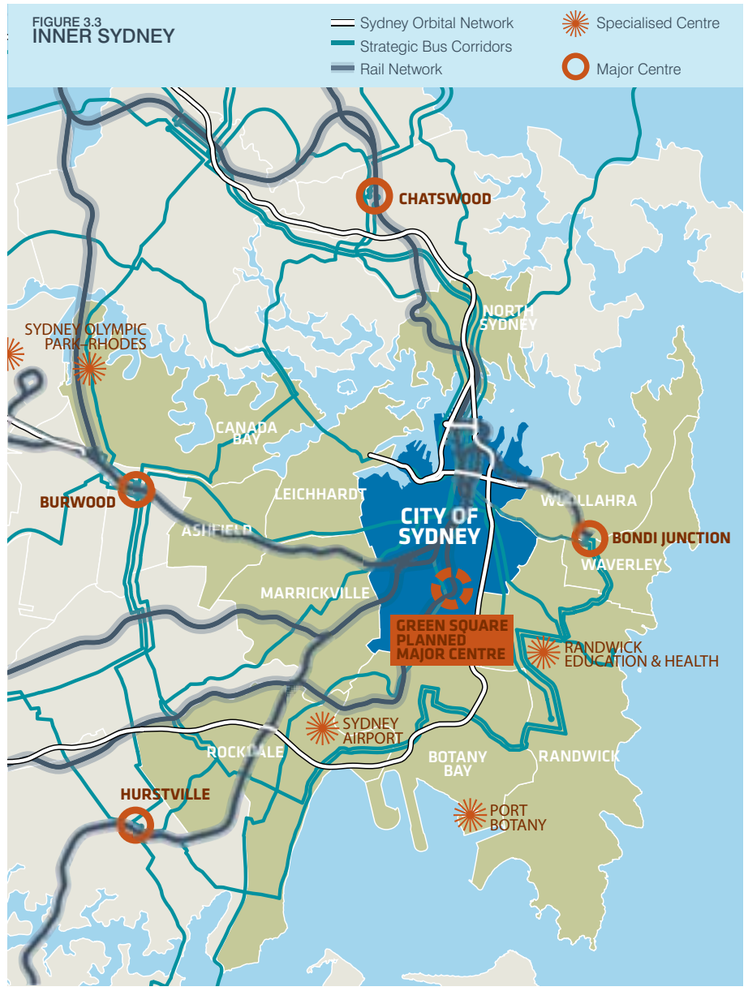
The City within Inner Sydney

Inner Sydney needs to improve accessibility to employment, social and recreation activities while also enhancing amenity. Integrated public transport and cycling routes should match demand patterns, link local government areas, and take advantage of networks such as open space. Local and centre-to-centre access should integrate with high quality urban design and co-located activities.

In addition, efficient road freight access to businesses should meets user needs and minimise the adverse external impacts on residents and visitors.

Road space allocation should support the preferred modes of public transport, cycling and walking. Traffic function and urban development plans for major transport corridors should be complementary.

FIGURE 3.3
INNER SYDNEY



The City and its Villages

Strong local communities need high quality and sustainable access to and between the City's Villages and local activities. Pedestrian and cycle networks should be comprehensive, connected, attractive and safe. Public transport can meet the needs of residents and workers to travel within the City, to the City Centre and to the Sydney Region by prioritising activity on key corridors.

Access for residents, workers and visitors should be maintained and the quality of the City's Villages can be protected from traffic speeds, air and noise pollution and congestion through good urban design during the implementation of transport initiatives.

FIGURE 3.4
MAJOR TRANSPORT MODES IN THE CITY OF SYDNEY LGA

The City Centre

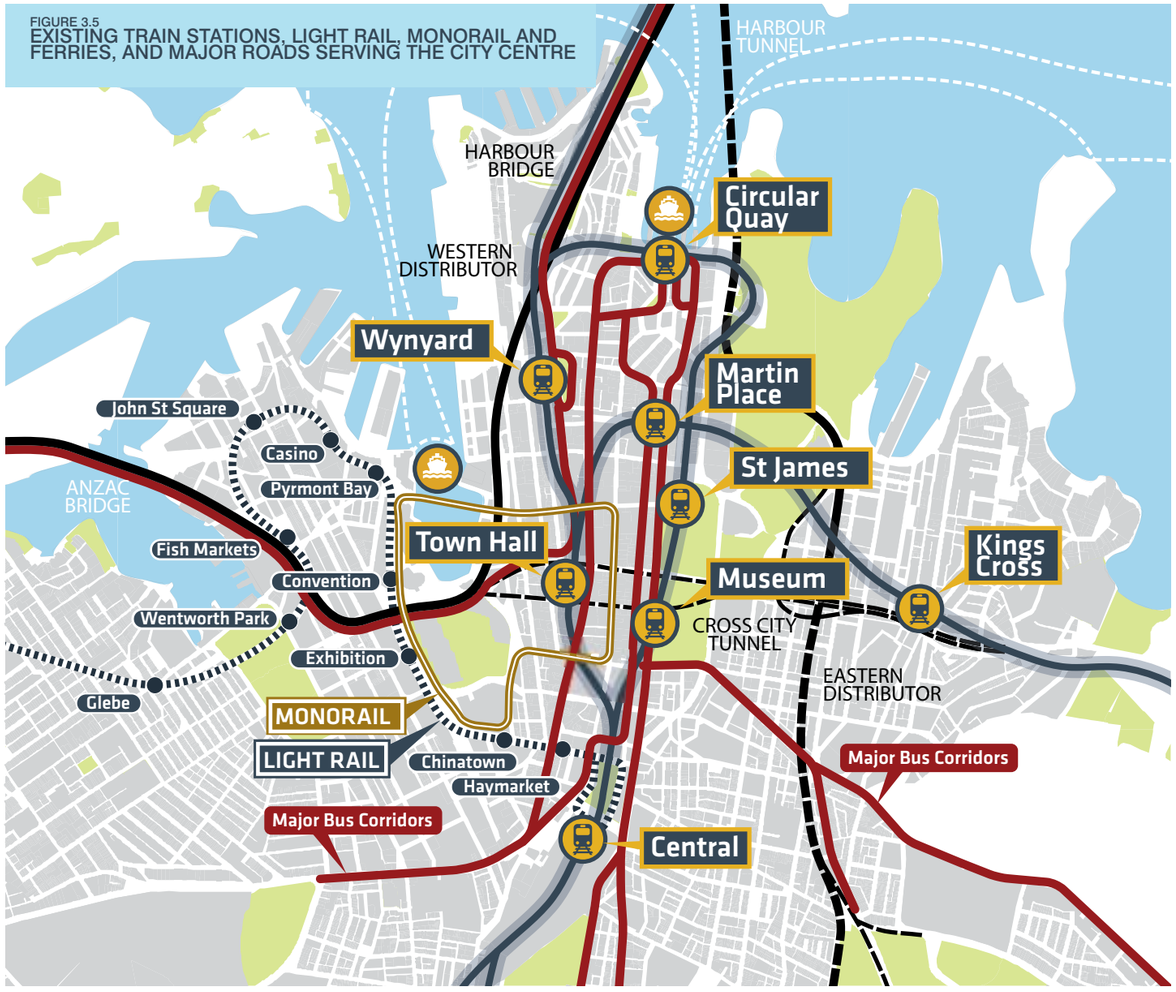
Current levels of motor vehicle use, from and within the City Centre, are not sustainable. Infrastructure pressures, a likely consumption of any additional road capacity and pollution levels all point to a need to decrease reliance on motor vehicles.

To do this, options to walk, cycle or use public transport must be improved through the design of continuous networks, high levels of amenity in pedestrian areas, safe and direct cycle networks and a public transport system which makes it an attractive mode of choice. Improvements cannot compromise the operation of other sustainable modes.

Redevelopment opportunities in the City need to integrate with improved transport services. Urban developments and transport systems should complement each other, and future transport options should be protected from inappropriate developments that may compromise their construction.

Managing travel demand and improving transport systems in the City Centre cannot displace problems, such as parking or traffic, into surrounding areas.

FIGURE 3.5
EXISTING TRAIN STATIONS, LIGHT RAIL, MONORAIL AND FERRIES, AND MAJOR ROADS SERVING THE CITY CENTRE



WHAT THE COMMUNITY SAID

The consultation undertaken for Sustainable Sydney 2030 highlighted the desire for a City that is connected, accessible, easy to get to and easy to get around.

People want a City…

"…with car free areas"

"…with less traffic congestion"

"…with user friendly and seamless transport"

"…with public transport to easily get around Inner Sydney"

"…with easy access in and around the City"

"…with one ticket to travel on all modes"

"…where activities are close to transport"

WHY ACTION IS NEEDED

The transport challenges facing the City:

1. Minimising greenhouse gas emissions and managing the impacts of global warming
2. Maintaining economic competitiveness
3. Reducing the negative impacts of congestion
4. Improving health and wellbeing
5. Managing the growth in freight traffic
6. Matching transport to user needs
7. Integrating the elements of Sydney's transport system
8. Ensuring reliable transport supports an ageing population and people with a disability.

1. Minimising greenhouse gas emissions and managing the impacts of global warming.

In 2000 almost 10 per cent of the City's greenhouse emissions came from transport. The Bureau of Transport and Regional Economics (BTRE)[1] estimates that under a 'business as usual' scenario greenhouse gas emissions from transport in 2010 will be 47 per cent higher than 1990 levels, and 68 per cent higher in 2030.

2. Maintaining economic competitiveness.

The ease of access to the City's opportunities and its quality of life are important elements when competing with other city economies. Transport contributes substantially to this quality of life.

3. Reducing the negative impacts of congestion.

City congestion impacts on the costs of doing business, noise pollution and air quality as well as overall amenity.

BTRE[2] estimates that Sydney Region's car traffic use will increase by 23 per cent between 2005 and 2020, an increase of 1.4 per cent per year. The cost of congestion in the Sydney Region over the same period is estimated to increase from $3.5 billion to $7.8 billion a year.

4. Improving health and wellbeing.

Achieving health and wellbeing outcomes is recognised as an important objective of urban transport planning.[3]

The Centre for International Economics[4] estimates that in 2005 the health and environmental costs of air pollution and greenhouse gas emissions in Sydney was $1.4 billion per year.

Specific health challenges, such as obesity, are an international problem and part of the cause and response to these challenges is how individuals travel. Urban design and transport behaviour that reduces the levels of active travel can accelerate the spread of obesity and other health problems[5]

5. Managing the growth in freight traffic.

Freight traffic is generally growing at a faster rate than population and private vehicle use. At the same time international evidence indicates transport intensity is growing with economic growth[6]. Solutions to manage the subsequent increase in freight movements are needed. The challenge is exacerbated by the fact that most urban freight has local origins and destinations, limiting the potential of freight being transported by rail.

6. Matching transport to user needs.

Current transport systems have evolved from relatively simple systems; the next stage of evolution must integrate the different transport modes so users can enjoy an affordable and accessible system with efficient connections, flexibility and links to a variety of uses around transport hubs.

7. Integrating the elements of Sydney's transport system.

The elements of Sydney's transport system are not sufficiently integrated—a legacy of planning based on single modes and single projects by individual organisations that do not work effectively together.

The State Government's *Urban Transport Statement* looks at measures to improve integration, including integrated ticketing, using technology to better-manage public transport vehicles, and enhancing of key transport interchanges, such as Chatswood. Improved integration of modes, services and land use are also part of a properly integrated system.

8. Ensuring reliable transport supports an ageing population and people with a disability.

Improving access and mobility is a response to basic human rights and social justice, providing life opportunities and reducing discrimination. The transport system should be accessible to all residents, regardless of their level of mobility. Consideration of a clear path of travel is important for the safety and mobility of older people, children, carers with prams and people with physical impairments.

Innovative vehicle use

TOWARDS A MORE SUSTAINABLE TRANSPORT SYSTEM

Sustainable Sydney 2030 provides the framework to develop an integrated transport system for the City. No single action will achieve this goal; rather, a package of complementary actions are required to meet the transport needs of residents, businesses and visitors in a more sustainable way.

Objectives:

3.1	Support and plan for enhanced access by public transport from the Sydney Region to the City of Sydney
3.2	Develop an integrated Inner Sydney public transport network
3.3	Reduce the impact of transport on public space in the City Centre and Activity Hubs to 'protect the centre'
3.4	Manage regional roads to reflect their role in supporting Sustainable Sydney 2030

WHAT THE CITY OF SYDNEY IS ALREADY DOING

The role of public transport, pedestrian movement and cycling is promoted by the City of Sydney through the following key projects:

Cycle Strategy and Action Plan

The Cycle Strategy and Action Plan 2007-2017 adopted by Council in April 2007 recognises the importance of protecting the safety of pedestrians and cyclists by providing up to 55 kilometres of separated cycleways. As part of the Strategy, the City of Sydney is investigating a public bicycle transport system.

Pedestrian Strategy-Public Life and Public Space Audit

The way pedestrians move about the City is a key issue, especially for people with disabilities. The study by Gehl Architects, identifies options to transform the City Centre's public spaces and will provide the basis to inform the implementation of a pedestrian network throughout the City.

Light Rail Network

The City of Sydney has completed studies, including detailed engineering feasibility, patronage assessment and financial analysis, demonstrating the feasibility of extending the light rail network between Central and Circular Quay Stations along Castlereagh Street and Hickson Road. The City has also released a report showing a preliminary light rail network for the Inner City area to provide mass transit along major transport corridors.

Local Area Traffic Management scheme reviews

The City of Sydney has undertaken reviews of Local Area Traffic Management in Redfern, Glebe, City East, Chippendale and Surry Hills to address local traffic concerns and improve safety and residential amenity. Further reviews are planned for other precincts.

Public Transport Services

The City of Sydney is working with the State Government on integrated transport planning at Green Square and implementing initiatives in the state government's *Urban Transport Statement* such as the *CBD Bus Strategy*, proposed CBD Rail Link and possible future metro rail lines.

Shuttle Bus Services

In 2007 the City of Sydney successfully sponsored the trial of a free City Shuttle Bus Service between Redfern and Glebe to provide access to shops and hospital appointments to address a lack of suitable options in the existing bus network. This initial shuttle bus service is continuing to operate together with a trial of a new City Shuttle Bus service between Woolloomooloo and Redfern, which connects to the Redfern to Glebe service.

Motorcycle and Scooter Strategy

The City of Sydney is rolling-out a Strategy and Action Plan to encourage the use of motorcycles and scooters in Inner Sydney. The Strategy will address a range of barriers which currently discourage the use of Motorcycles and Scooters, including parking, safety and security.

Car Share

The City of Sydney has initiated a trial of dedicated on-street and off-street car share parking, which will deliver a network of 107 car share parking locations throughout the City.

Taxi Strategy

The City of Sydney is developing a Taxi Strategy to improve access and use of taxis in key demand areas such as the City Centre and Kings Cross.

Integrated Parking Management

From mid-2008 the City of Sydney introduced a differential parking permit scheme which encourages the use of environmentally-friendly vehicles. Residents with less polluting vehicles will pay significantly less for their parking permits than residents with more polluting vehicles.

Endorsement of Gehl Proposals

The City of Sydney Council has endorsed a range of proposals from internationally renowned Gehl Architects for reducing traffic volumes, returning the streets to pedestrians and cyclists and introducing Light Rail.

Objectives & Actions

OBJECTIVE 3.1 Support and plan for enhanced access by public transport from the Sydney Region to the City of Sydney

CITY NOW

The radial rail and bus networks perform a major role moving commuters to work in the City Centre, but the system has failed to keep pace with growth.

In 2001 nearly 100,000 people travelled by train to work in the City Centre, or 53 per cent of all work travel to this area. When students, shoppers and other users are included, nearly 180,000 passengers entered the City Centre in the morning peak. The majority come from the west and south (many passengers from the northern parts of the Sydney Region arrive on services from the west via Strathfield)[7].

FIGURE 3.6
TABLE 1. RAIL PASSENGERS ENTERING WIDER CITY CENTRE CORDON, 2003 WEEKDAY AM PEAK (6:30–9:30)[7]

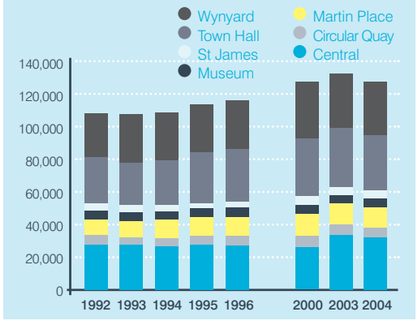
APPROACH	LINES	PASSENGERS	%
Northern	North Shore Line	22,310	12%
Eastern	Eastern Suburbs Line	13,580	8%
Western	Main West and Bankstown Lines	73,920	41%
Southern	East Hills and Illawarra Lines	69,270	39%
		179,080	

Public and private buses carry over 50,000 passengers during the morning peak on over 1,200 services.

Rail demand increased by just over 20 per cent over the 10 years to 2003. Overcrowding occurs during peaks on several parts of the rail network including the Illawarra, East Hills, West Suburbs and North Shore lines. During the morning peak one hour passenger loading across all rail services entering the City Centre is typically 120 per cent of seated capacity.[7]

Congestion at Town Hall, Central and Wynyard Stations is high, with each handling at least 100,000 passengers a day and overcrowded occurring on platforms and stairs (see graph next column).

FIGURE 3.7
AM PEAK EXITS FROM CITY TRAIN STATIONS



The road network is congested, particularly during the weekday peaks.

On an average weekday, an estimated 130,000 motorised trips enter the City. The rate of growth in private vehicle use in the Sydney Region is higher than the growth in population and employment.

During 1991-2001, the use of private vehicles for non-work trips across the Sydney Region grew at a faster rate than for work trips. Work trips account for about 40 per cent of all car driver trips but 50 per cent of car vehicle kilometres travelled (VKT).

Ferries serve a niche market and have an iconic role.

Although ferry users make up a small proportion of travellers to the City, the Inner Sydney ferry system provides connections for parts of Sydney that are poorly serviced by other modes of public transport. This role must be recognised and facilities within the City Centre must be maintained and better integrated with the rest of the public transport network.

The Sydney Opera House

Future projections for travel to the City

By 2030 the City's population is expected to increase from 160,000 to 245,000. This is a higher growth rate than any other metropolitan subregion except the South West. Employment in the City is expected to increase from 370,000 to 465,000 in the same period. The higher growth in population than employment could significantly change the distribution of work trips into the City. The percentage of work trips from City residents is expected to increase from 10 per cent in 2001 to 17 per cent in 2030 and the percentage of work trips entering the City from outside will decrease from 90 per cent to 83 per cent.

There will be an overall increase in weekday work trips from outside the City of 50,000 (5.6 per cent from 2001 levels), compared with a 25 per cent increase in City employment. It is more difficult to estimate the future growth in non-work trips entering the City Centre on a typical weekday. These trips account for 37 per cent of all weekday trips into the City but just 16 per cent of morning peak trips. Non-work trips may grow at a higher rate than work trips—a 15 per cent increase in non-work trips entering the CBD is assumed for the period 2001 to 2031.

The number of trips to the City from outside on an average weekday is predicted to increase from 470,000 in 2001 to 512,000 in 2031. In the critical morning peak period, the number of trips is expected to increase from 282,000 in 2001 to 302,000 in 2031 (around seven per cent). Demand for Inner Sydney travel will grow at a rate similar to the population growth rate.

CITY IN 2030

Public transport is the mode of choice for all trips to the City from other parts of the Sydney Region.

The metropolitan public transport system will effectively manage 80 per cent of all work related trips from the Sydney Region to the City Centre and be the mode of choice for other trip-making. Inner Sydney's transit network, including light rail and metro rail, will be integrated with the heavy rail network to provide for 'seamless' movement from the Sydney Region and Inner Sydney. The car will be the choice of last resort for trips to the City.

ACTION 3.1.1

Support upgrades to the existing regional rail system and new metro rail lines.

The timely upgrades to the existing rail system and new metro rail initiatives are required to ensure the City can develop at its envisaged rate at least for the next 10 to 15 years. The regional public transport networks support travel from across the region to the City, which is the pre-eminent employment, recreation and cultural destination in Sydney. Without the metro rail and other heavy rail investments, the City will not be able to meet its targets to share the expected population and employment growth in the Sydney Region. The City of Sydney supports the early implementation of proposed public transport initiatives.

FIGURE 3.8
STATE GOVERNMENT PRIORITY METRO LINES (MARCH 2008)

ACTION 3.1.2

Investigate development opportunities at and around existing and new stations in proposed Activity Hubs.

The proposed metro rail lines will improve rail capacity in the City Centre areas served by rail. Any preferred alignments should be integrated with land use and provide high quality access to Barangaroo. Land use controls and approaches at new station sites should recognise their high levels of accessibility by implementing place planning policies that maximise transit-oriented development potential of these sites.

The new stations should also provide opportunities to develop major transport interchanges at entrance points to the City Centre. These new stations could, in the short-term, reduce traffic levels on surface streets and, in the long-term, be used as major bus interchanges. The 10 transport initiatives described in the City Vision include Northern and Southern interchanges incorporated into new rail stations. The City of Sydney will plan the precincts around City Centre stations to maximise the benefits from the state government's investments.

ACTION 3.1.3

Improve the operation of existing City Centre stations, including their interchange role.

Recognising the congestion and overcrowding at Wynyard, Town Hall and Central, the City of Sydney could work with the State Government to improve safety and ease of access to stations, and to achieve better integration of stations with the developments of City buildings and open spaces.

OBJECTIVE 3.2

Develop an integrated Inner Sydney public transport network

CITY NOW

City residents travelling within Inner Sydney rely on a range of transport modes and planning for this requires more sophisticated transport policy responses.

Residents of the City, on average, make more trips (4.4 per day vs 3.8) but shorter trips (4.5 kilometres versus 9.4 kilometres) than the Sydney Region average. City residents are more likely to work locally (59 per cent); less likely to own a car (0.7 vehicles per household versus 1.46 for the Sydney Region); and more likely to walk or cycle to work and for other activities. Walking and cycling are used much more by residents of the City—48 per cent of trips compared with just 19 per cent in the Sydney Region. Private vehicle use is less than half that of the Sydney Region.[8]

If new City residents continue to work within the City as currently, demand for travel to the City from the Sydney Region will increase only moderately, yet demand for public transport services in Inner Sydney will increase at a faster rate.

Other parts of Inner Sydney are expected to have significant population increases—the Inner West Sub-region is expected to increase by 26 per cent, for example[9].

While the *Urban Transport Statement* discusses a specific CBD Bus Strategy to address Inner Sydney travel demands, the identified measures, or current ferry service, are not sufficient to cater for the long-term increase in demand.

FIGURE 3.9
WEEKDAY MODE OF TRAVEL BY RESIDENTS
Source: HTS 2004

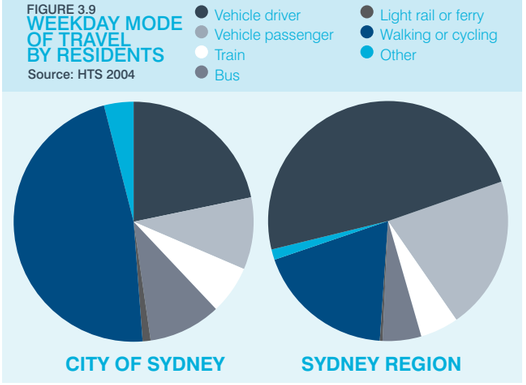


FIGURE 3.9 compares the mode of travel for an average weekday in 2004 between residents of the City and the Sydney Region. It demonstrates that trips made by residents of the City place a much lower burden on both the road network and the regional public transport network.

FIGURE 3.10
WEEKDAY TRIP PURPOSES BY RESIDENTS
Source: HTS 2004

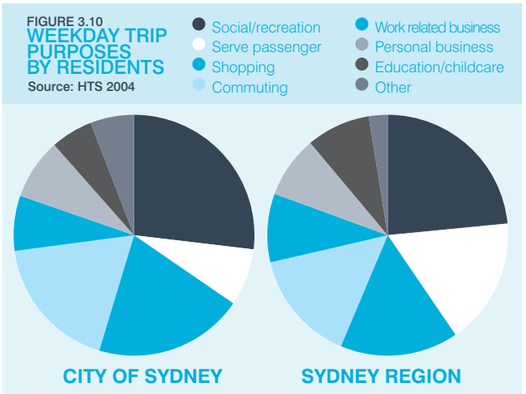


FIGURE 3.10 compares weekday trips for the residents of the City compared with the Sydney Region. The differences largely reflect the difference in household structure, with less families living in the City compared with other parts of Sydney.

City residents travelling within inner Sydney rely on a range of transport modes which need more sophisticated transport policy responses.

Inner Sydney residents are more likely to use a range of transport modes, including rail, bus, light rail, ferry, cycling and walking.

This means that road space needs to be used and managed for a variety of travel modes, and public transport needs to be 'seamlessly' integrated across modes. Alternative transport services are necessary for Inner Sydney travel.

The Inner Sydney bus network has limited capacity to increase services due to congestion, particularly in the City Centre corridor. Public transport corridors with higher levels of priority are required.

Lack of integration between transport modes and inefficient information and ticketing systems.

A recent performance audit by the NSW Auditor-General concluded there was 'considerable potential for the Ministry of Transport to plan and manage interchanges more effectively, so as to make better use of our public transport network'[10].

The City has the greatest mix of public transport modes and the most interchange activity in the Sydney Region. Circular Quay and Central Station, as examples, provide connections between train, bus, light rail or ferry services. This diversity will remain and interchange activity is likely to increase.

Transport users range from regular commuters, residents, students and visitors. Only regular commuters are likely to be familiar with available services—the other groups are more likely to use public transport irregularly and for a range of different trip destinations and purposes and at different times of day.

Deficiencies delaying the introduction of advanced technology for integrated ticketing and information systems should be addressed to improve the attractiveness of public transport and minimise future motor vehicle use. Public transport within Inner Sydney can accommodate more non-commuters which requires a solution to attract significant increases in patronage for non-work use and outside peak travel periods. Ultimately, an easy to use public transport system will encourage Inner Sydney residents to reduce their level of private vehicle use.

Integration of different modes and services will be necessary as new modes such as metro rail are explored.

CITY IN 2030

Enhanced opportunities for Inner Sydney residents to take public transport for travel to the City Centre.

Light rail is advocated as a system to link locations within the City and around Inner Sydney. Potential exists for staging transport improvements in key public transport corridors, by moving from on-road buses, to segregated buses, and then light rail or metro rail as passenger demand increases.

A new transport system, such as a metro rail system, would carry the passenger demand in corridors such as the south-east to inner north-west which are not served by high capacity fixed rail. Such a system could cover a wide area and be supported by appropriate land uses (this is different to regional rail systems in the outer parts of the Sydney Region where there are more opportunities to access stations from longer distances by car or bus). The State Government and Inner Sydney councils could identify potential metro rail routes and incorporate them into their land use planning.

Increased tourist and event accessibility between the City Centre, Activity Hubs and Villages.

While attractions such as the Opera House will continue to attract a large number of tourists, the number of independent and repeat travellers will increasingly travel to other parts of the City for social and cultural events. High quality public transport and pedestrian networks will meet the needs of the crowds that come to the City on these occasions.

An accessible network for older people and people with a disability.

Constrained access can be a barrier to people participating in work, recreation or daily activities. Improving access and mobility is a response to basic human rights and social justice, providing life opportunities and reducing discrimination. More than half of people aged 55 years and over have difficulties with mobility, sight and hearing. Easier access for this group, people with a disability and carers and parents with children would be a great benefit.

The transport system should be accessible to all residents, regardless of their level of mobility.

City of Sydney

Light Rail service

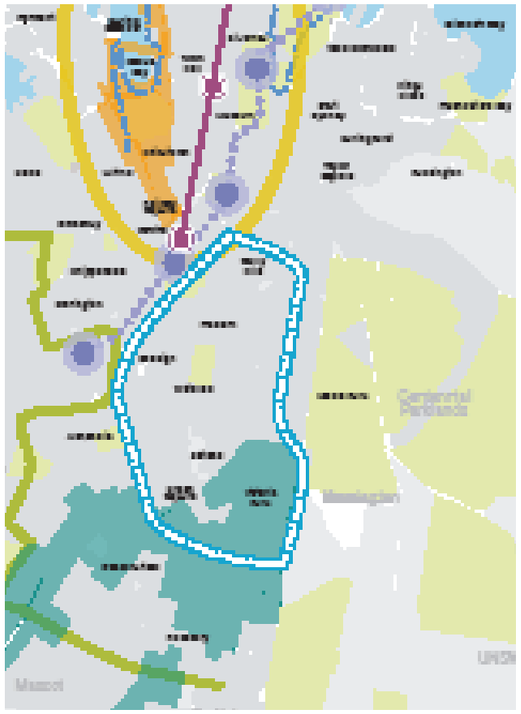
ACTION 3.2.1

Develop an Inner Sydney Transport Strategy.

Any transport plan for the City should consider the continuity of routes and interactions with Inner Sydney and include complementary actions that span the City's boundaries. The City of Sydney, Inner Sydney councils and the State Government need to agree on an integrated transport system for Inner Sydney and priorities for action, achieving a fully endorsed and approved Inner Sydney Transport Strategy.

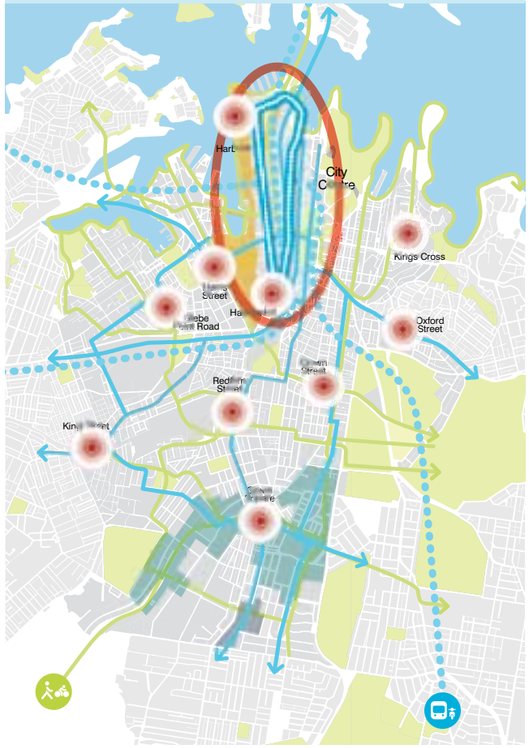
The *Inner Sydney Transport Strategy* should consider:

- opportunities presented by proposed metro rail and heavy rail upgrades;
- East-west connections south of the City Centre, for example between Paddington and University of Sydney, and University of NSW to Newtown;
- appropriate modes in key corridors, including light rail and metro rail;
- potential for park and ride in outer areas;
- radial connections to Anzac Parade and Botany and Mascot;
- greater on-road priority for public transport;
- upgraded modal interchanges, for example, at Redfern;
- the role of integrated ticketing and information systems;
- road networks and hierarchies;
- the potential of 'value capture' to help fund improvements;
- needs of cyclists and pedestrians;
- opportunities for increased ferry services;
- a reduction in bus numbers in the City Centre; and
- integrated parking strategies.



Project idea Green Square Light Rail Loop

FIGURE 3.11
TRANSPORT CORRIDORS & ACTIVITY HUBS



ACTION
3.2.2

Improve integration of cross-regional public transport services, including light rail and metro rail, and the quality of transport hubs.

Much of the public transport in Inner Sydney is focused on the City Centre. This pattern maximises access to the City Centre and allows passengers to move between radial services. However, passengers who want to move across Inner Sydney have to travel via the City Centre, placing unnecessary demand on services and an inefficient travel outcome. Improved cross-regional services would allow more direct travel within Inner Sydney. Currently, some cross region bus services operate and demand for these is likely to increase as major centres, such as Green Square, are developed.

Implement, over the short-term, an improved cross regional transport service connecting the Inner West, Green Square and Randwick Education and Health Precinct.

ACTION
3.2.3

Develop modal interchanges.

Modal interchanges are 'hubs' where passengers move from one type of transport, such as a bus, to another, such as ferry or rail service. High quality seamless interchanges would increase access to more parts of the City, improve the flexibility of travel and improve the number of places people in the Inner Sydney could access. Residents in the Inner Sydney should access major activities and services with no more than one change of public transport mode.

Stations such as Redfern could offer opportunities for improved links between current and new transport services and thereby be potential places for urban renewal and provision of high amenity public spaces.

In the long-term, new heavy rail and/or metro rail stations could develop more substantial, high capacity underground interchanges to cater for high commuter demand for travel through the City Centre.

The City of Sydney will work with adjacent Councils and the State Government to identify the development potential of major transport hubs to improve the integration of public transport services.

Conga line of buses in the City

ACTION
3.2.4

Identify a network of local bus services.

Within the City a dedicated community-focused public transport service would in the short-term support the development of the Activity Hubs. As these Hubs grow, the regional public transport system would be adjusted to incorporate them into key transport corridors.

A dedicated local public transport service is more suited to match the changing needs of the community it serves.

The City of Sydney will work with the State Government and community transport operators to develop a long-term local bus network that links the Villages, Activity Hubs and City Centre.

ACTION
3.2.5

Develop an integrated accessible community transport network.

Accessible and community transport services are vital in supporting the most disadvantaged groups in the City. The City has a diverse population, ranging from the extremely well-off to the extremely disadvantaged. Disadvantage can come in many forms, including employment status, income, age, disabilities or infirmities. Within the City a number of organisations provide excellent services, but if these services are not used efficiently, or there are gaps in service provision, access to where people need to go is diminished and some deserving groups could miss out.

The City of Sydney will work with service providers and government to identify ways to improve services and integration of services for transport disadvantaged groups.

OBJECTIVE
3.3 Reduce the impact of transport on public space in the City Centre and Activity Hubs

CITY NOW

Pedestrian experience in the City is poor.

The quality of the environment affects the City's attractiveness. Pedestrians are exposed to the good and bad aspects of the City's environment more than most transport users through their direct experience of the footpaths, buildings, safety and air quality.

The City should be a great walking city, but it does not meet this promise. High levels of traffic congestion, excessive delays for pedestrians at traffic lights, limited crossing legs at intersections, poor quality streetscapes, high traffic speeds, uninviting laneways and heavily congested footpaths combine to make the pedestrian experience in the City a poor one.

Lack of clear connections for pedestrians in the City.

Comfortable, stress-free access to work, services and leisure were identified as important elements of a liveable city. This includes clear information on where activities are within the area and how they can be accessed by public transport or on foot.

Public transport operation is constrained.

During the City's consultation program, the community expressed concerns about the operation of public transport in the City Centre. Particular issues identified included:

- Buses make up approximately one per cent of traffic in the City Centre but due to their size are perceived to be excessive and responsible for lowering amenity due to noise, fumes and intimidation.
- Buses are unnecessarily delayed by legal and illegal on-street parking during peak commuter times.
- There are difficulties in travelling from east to west across the City Centre by public transport.
- Buses are parked between trips in valued locations in the City.
- Delays are incurred by buses at intersections due to turning traffic and signal priority to east-west traffic movements.
- Safety at rail stations is poor, with overcrowding at Town Hall Station being a major concern during the evening peak.

Active management of travel demand.

There should be less reliance on cars for travel to and within the City and a freeing-up of road space for pedestrian and cycling facilities, public domain improvements and transport priority measures. This improved use of public space would increase overall transport system capacity, reducing the environmental impacts of transport and improving urban amenity.

Genuine public transport alternatives need to be developed through a joint approach with the State Government improving public transport networks and regional road bypasses, and the City of Sydney improving pedestrian movement and cycling facilities and urban spaces.

An integrated approach to traffic management, public transport and public domain.

This future vision could be achieved through a package of measures:

- An improved public transport network linking the City Centre to surrounding areas, and linking across Inner Sydney activity centres.
- A fast, reliable and convenient north-south surface public transport system within the City Centre.
- Increased implementation of pedestrian-only streets and laneways.
- A gradual redistribution of total parking supply away from the City Centre and reduction in on-street parking spaces.
- Restricted times and locations for delivery and service vehicles to reduce their impact on road space during peak travel demand periods.
- Widened footpaths and increasing road space for cycling.
- Managed demand for car and truck travel through the City Centre by improving the efficiency of bypass routes.
- Reallocated priority at traffic signals towards pedestrians, public transport and cyclists.
- Reduced speed limits across the full City area.

ACTION 3.3.1

Improve public transport circulation in the City Centre.

The NSW Government *Urban Transport Statement* outlines measures to improve bus operations in the City Centre, including extending the operational hours of bus lanes and consolidating bus routes. While there is clearly a need to provide improved bus priority in the City Centre, the unique nature of streets and their different uses need to be considered:

- During the morning and afternoon peak commuter periods, people travelling between home and work place a high priority on the delivery of good public transport services.
- During other periods, the City Centre streets are a focus of non-transport related activities such as deliveries shopping and dining. Surface public transport operations have the potential to impact on the amenity of these activities.

While on-street bus lanes support the objective of good public transport services in the commuter periods, their operation during other time periods has the potential to impact on the safety and amenity of the City's footpaths.

Further improvements should be investigated such as:

- A City Centre light rail loop to improve north-south access in the City Centre (refer to FIGURE 3.12). This north-south link should deliver high frequency system that does not compromise amenity and reduces the environmental impact of transport.
- Developing high quality transport interchanges in the north and south of the City Centre, linked with a light rail loop, to improve access in the City Centre.
- Establishing a City Centre Green Zone where high priority is given to sustainable transport modes. A 'green zone' could be supported with improved walking and cycling networks, increased public transport options and on-street parking strategy to prioritise green vehicles and car sharing.
- Creating a Town Hall Transport Plaza to minimise the need for bus and vehicle access across the City Centre. The plaza would give priority to light rail, cycling and pedestrian activity, while ensuring it is integrated with commercial, retail, entrainment and cultural activities to create a lively City precinct.
- Provide for an upgraded Town Hall train station and possible new train station at Park and Pitt Streets to accommodate new underground metro rail or heavy rail.

Light rail could also be an effective form of public transport for some services into the surrounding areas. It combines high service frequency, low environmental impacts and high passenger comfort provided that it operates in its own right-of-way.

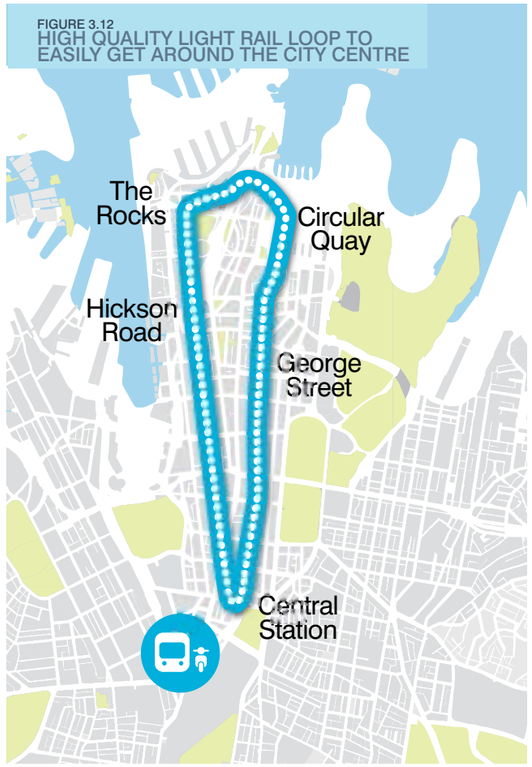
ACTION 3.3.2

Increase the amount of street space dedicated to sustainable transport modes and urban space.

The City Centre is characterised by narrow streets between tall buildings. As population and employment grows and activity increases there will be increased pressure for the more efficient and sustainable use of this limited street space for public transport, cycling, walking and urban space. Many of the footpaths widened in the lead up to the 2000 Sydney Olympics and Paralympics are already experiencing crowding. The City of Sydney's Cycle Strategy calls for separated cycle lanes on key corridors. There is also a desire for more urban space in the City Centre to contribute towards its overall vitality and liveability.

The space between the City's buildings needs to be viewed as a major asset with a range of competing uses. The 2030 Vision incorporates a broad set of projects and measures that would require the conversion of existing uses of some public space. Maintaining sufficient capacity for transport in the City Centre and achieving environmental goals requires the conversion of traffic and parking lanes in some locations to public transport and cycling lanes.

FIGURE 3.12
HIGH QUALITY LIGHT RAIL LOOP TO EASILY GET AROUND THE CITY CENTRE



ACTION
3.3.3

Manage car travel demand.

As travel demand increases with the forecast population and employment growth, there needs to be further increases in the share of sustainable transport modes. These include public transport, cycling and walking, achieved through the timely delivery of improved services in conjunction with continued constraints on the provision of parking and road space. As new infrastructure such as metro rail lines or park and ride opportunities are completed there should be an associated tightening of parking supply.

Parking provision in the City Centre needs to address motorist decisions, including the total parking supply, the distribution of parking, pricing and vehicle priorities. A parking strategy needs to be part of the Inner Sydney Transport Strategy, the outcomes of which would influence how many cars come into the City, and whether they stay parked all day (commuter vehicles), or are shopping/recreational traffic that bring several people in for activities during the day.

On-street parking within and close to the City Centre is less able to contribute to overall parking supply and is increasingly inefficient in terms of use of road space and its contribution to circulating traffic. Consideration needs to be given to the redistribution of parking locations from on-street to off-street and from the heart of the City Centre to its periphery. Parking policies and pricing mechanisms such as parking priorities for energy efficient vehicles, car pooling, tenanted parking in peripheral locations, and offset and trading schemes for parking spaces in new developments would support these initiatives.

Outside the City Centre, the City of Sydney will continue to monitor and refine its parking management schemes. As cross regional public transport services improve there will be an opportunity to further manage the impacts of car travel on Inner Sydney roads.

Expand pedestrian-only streets and laneways.
Reducing car travel provides the opportunity to increase the number of streets and laneways where public domain improvements could be made, including a network of pedestrian-only streets and laneways. Traffic calming measures would emphasise the priority given to cycling and pedestrian movements.

Better utilise City bypass routes and alternative routes.
Traffic that does not have a destination in the City Centre should not have to travel on surface streets through the City Centre. Roads such as the Cross City Tunnel could play a bigger role when used to capacity and additional connections would allow greater flexibility. Existing bypass routes are only partially effective due to the lack of connections—for example, the Western Distributor to Cahill Expressway—and the inconsistency in toll charges.

Restrict the movement of through traffic within the City Centre.
Traffic in the City Centre should generally be accessing particular sectors rather than using the streets as through routes. Ultimately, a series of traffic precincts could be developed. Under such a scheme, access to each precinct would be primarily from bypass roads and movements between the precincts would be restricted to priority vehicles such as public transport, cyclists and emergency vehicles. This action would reduce through movement and provide more space for pedestrians, public transport and bicycles (refer to FIGURE 3.13).

Support low impact modes.
More sustainable transport choices such as scooters and motorcycles could be encouraged in lieu of the private motor car to reduce greenhouse gas emissions, congestion and parking demands. Use of scooters and motorcycles could also provide a flexible and low impact means of connecting the City's Villages. The City of Sydney has developed a motorcycle and scooter strategy.

FIGURE 3.13
TRAFFIC PRECINCTS

Green Square Light Rail

A key focus of the Vision is the need for an integrated high volume public transport mass transit system. There is a need to connect the City Centre area to Green Square, as this area has a growing population. The City of Sydney proposes a Green Square light rail connection for funding by State and Federal Government as part of infrastructure improvements for Inner Sydney.

Improving inner City bus travel

ACTION
3.3.4

Develop sustainable travel initiatives.

Physical and service improvements alone will not maximise the role of more sustainable travel modes. City of Sydney and other government policies, community education and council/business practices can all be important elements of comprehensive travel planning.

Travel plans need to focus on, and promote, sustainable solutions. Behavioural change activities provide the catalyst for organisations, businesses and individuals to review their travel behaviour and move towards more sustainable travel options.

There is the potential for the City of Sydney to work with the business sector on development sustainable transport plans.

The City of Sydney could develop guidelines and planning requirements for sustainable travel plans and lead implementation through its own activities.

ACTION
3.3.5

Investigate transport pricing mechanisms to encourage sustainable travel.

Pricing is an effective way to influence travel choices. Options identified during consultation for Sustainable Sydney 2030 included targeted parking charges, cordon pricing, congestion pricing, single perimeter parking/public transport fees and restructured tolls. Any pricing measures would need to be clearly communicated to the community and properly implemented to avoid negative impacts.

The City of Sydney can play a role in developing pricing mechanisms that encourage sustainable travel while understanding their economic, equity, financial and environmental impacts.

OBJECTIVE
3.4

Manage regional roads to support increased public transport use and reduced car traffic in City Streets

CITY NOW

The regional road network is a major part of the City's transport system, but the amenity of some key City streets in the network is severely compromised.

On an average day, almost 500,000 vehicles enter and leave the City either as through traffic or with origins or destinations in the City. Half of this traffic is carried on Victoria Road (Anzac Bridge), Parramatta Road, Southern Cross Drive, Sydney Harbour Tunnel and Sydney Harbour Bridge.

Where key City streets (eg: Harris, Abercrombie, Cleveland, Regent) have been incorporated into the regional road network, the increasing traffic impacts have severely compromised their amenity.

Freight is placing new demands on the City's road network.

Freight traffic has grown at 7.4 per cent each year since 1995-96, compared with 2.3 per cent per year for private vehicle traffic.[12] Industries are moving to 'just-in-time' and scan-based trading and this is resulting in the more frequent shipment of smaller amounts of freight at short notice.[13]

Most freight is carried by road and this proportion increased from 82.2 per cent in 1995-96 to 85.6 per cent in 2000-01.[14] The largest growth in freight vehicles on the road has been in light commercial vehicles that service the City's businesses and the larger B-doubles that service Port Botany.

Traffic congestion impedes Sydney's economic development.

While constraints on parking within the City will continue to limit the growth of private vehicle use to the City, the peak period demand for through traffic on the major regional road system is expected to grow by at least 22 per cent by 2031. The NSW Government *Metropolitan Strategy* identifies some potential projects such as the widening of sections of the M4 and M5, and an eastern extension of the M4. Longer term plans to improve the regional road network capacity to reduce congestion are not clear.

While Port Botany is the major arrival and departure point for containers, freight movements are distributed widely across the Sydney Region. About 90 per cent of goods originating from Port Botany are destined to locations in Western Sydney and freight activity in this area is expected to increase as industrial land is developed along the M7 Motorway corridor.[15] Sydney Airport handles nearly half a million tonnes of airfreight each year, which is about 50 per cent of Australia's total air cargo.[16]

Average growth in road traffic through to 2026 is expected to be approximately 1.4 per cent each year, the result of a 0.9 per cent per year increase in car travel and 2.8 per cent per year growth in truck travel. The *Metropolitan Strategy* targets 40 per cent freight container movements from Port Botany by rail yet despite this, truck movements from Port Botany are expected to increase from 2,900 per day in 2005 to 4,700 in 2021—a 60 per cent rise. Over the next 20 years, airport-based freight is expected to triple and passenger numbers increase from 28 million to 68 million per year.[17] This level of growth will be accompanied by an increase in associated industry around the Airport, which combined could add 32,000 vehicle movements in the morning peak period by 2024.[18]

This increased traffic generation has the potential to impact on the amenity of residential areas in the south of the City, such as Green Square. However, the State's economy depends on the efficient movement of freight and this efficiency would be undermined if freight movements are not facilitated on key routes.

Without a reduction in commuter traffic and careful management of freight, significant additional congestion on the road network can be anticipated. This will have major implications for Sydney's economic competitiveness into the future.

CITY IN 2030

Innovative demand management could reduce congestion on regional road network.

Effective land use and transport integration, wider metropolitan settlement policy and planning and travel demand management will be important in reducing congestion on regional roads. The City of Sydney will only support regional road network capacity expansion where it is accompanied by major improvements in amenity and a downgraded traffic role for some key streets, and public transport improvements.

Freight demands managed to protect residential amenity.

More freight will travel by rail, and freight traffic on roads will directed to dedicated truck routes separated from residential areas. Residential development will be discouraged on roads with very high traffic and truck volumes.

ACTION
3.4.1

Develop a road hierarchy and management plan for major corridors.

Potential conflict between traffic movements, land use, urban design and amenity objectives along major transport corridors influences decisions on the role of individual corridors and how land use is to be managed together with transport. The efficient operation of Activity Hubs that are located on major corridors, such as Green Square, depends on the design of the major transport links and on the quality of internal circulation patterns.

Major roads in the City carry a mix of cars, trucks and buses. On streets such as Botany Road potentially conflicting objectives—between maintaining traffic flows, urban renewal and environmental improvements—need to be clarified so each corridor is managed in ways that are consistent with their defined role, be it primarily for through traffic, urban amenity, local access or public transport services.

Road space management and road access plans are needed to align the primary purpose of each type of route and land use plans for abutting land.

The City of Sydney will work with the State Government to establish this road hierarchy for major routes by reviewing public transport needs, urban renewal proposals, freight requirements, traffic demands, access issues, and sustainable transport options.

Review of the road hierarchy integrated with land use directions.

In partnership with the State Government, develop a road hierarchy and road management plan that reflects public transport needs, urban renewal proposals, freight access requirements and traffic demands.

Identify the medium to long-term role of all key roads and the management regime that will be worked towards as part of implementation of the plan. Include consideration of:

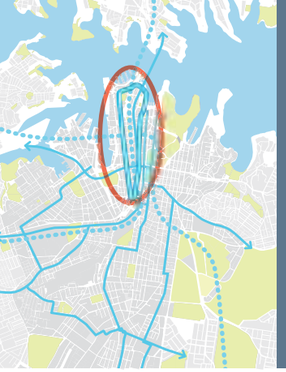
- Urban renewal proposals;
- High demand public transport corridors;
- Access to the industrial/logistics areas;
- Strategic bicycle routes;
- Traffic demand and capacity;
- Protection of non arterial roads from traffic intrusion; and
- Road access management principles for the different routes.

ACTION
3.4.2

Ensure opportunities to improve amenity are provided as part of future regional road management.

New road links may provide opportunities to reclaim road space elsewhere. This could be planned in conjunction with major investment in regional public transport. New roads divert traffic from existing roads and action has to be taken at the time the new routes are opened to provide greater priority for public transport, cycling or walking, or for improvements to the amenity of adjacent land use, on these existing routes. For example, construction of the M4 East and extensions must also free-up roads such as Pyrmont Bridge Road, Cleveland Street, Botany Road and Harris Street for these to have a more liveable function.

The City of Sydney will work with other Inner Sydney councils and the State Government to ensure opportunities for improved use of local road space are realised in association with regional road projects. And also that funding for public transport is given equal or higher priority.



PROJECT IDEA

PROTECTING THE CENTRE

Transport measures to support public life in the City Centre

LOCATION

Sydney City Centre

VISION

Protecting the Centre proposes innovative and ambitious measures to reduce the impact of traffic on public space and improve amenity in the City Centre. Staged measures include a reliable, frequent and affordable light rail loop to easily get around the City Centre linked to upgraded rail stations and new metro rail lines and public transport corridors that connect Central Sydney with Inner Sydney. This transit initiative will be supported by transport management actions to reduce the number of private vehicles in the City Centre.

AIMS

- Deliver a fully integrated transport system for the City Centre.
- Improve access in the City Centre.
- Reduce congestion in the City Centre to improve and activate public spaces.
- Activate City Centre public space.
- Support sustainable renewal by managing impacts of transport on surface streets.

IDEAS

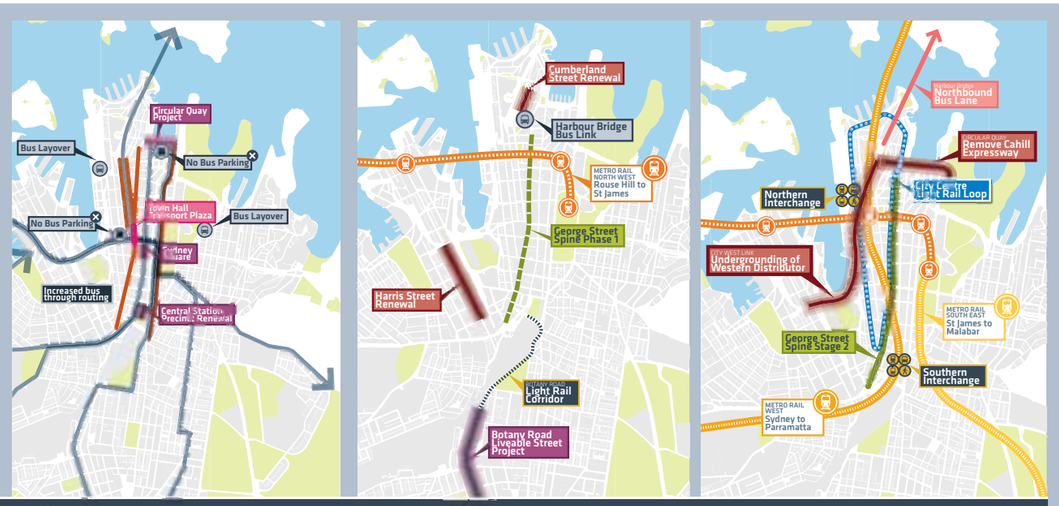
- A series of integrated and sequenced transport measures that gradually alter travel patterns and release public spaces for enhanced City life.
- Reallocation of the use of surface streets.
- Build on opportunities offered by major transport projects such as underground rail links.

BENEFITS TO THE CITY

- Improved access to and within the City Centre.
- Improved street amenity and liveability.
- Increased transport capacity to meet growth in travel demand.
- Managed environmental impacts of transport.
- Improved economic performance through reduced congestion.

IMPLEMENTATION

- Key partnerships with State Government and Inner Sydney councils.



	STAGE 1	STAGE 2	STAGE 3
TRAFFIC MANAGEMENT	• Introduce 'green zones' to prioritise walking, cycling and public transport. • In key locations, reduce on-street parking. • No through traffic on George Street-Park to Market Street. • Introduce pedestrian-only streets —such as Alfred Street and Hay Street.	• Divert general north-south traffic from George Street. • Traffic management measures on east-west streets. • Connect Darling Drive to Regent Street.	• Restricted east-west access across George Street. • Reduce traffic through the City with a connection from the Cross City Tunnel to the Western Distributor. • Reduced traffic through the City with improved connection from the Cross City Tunnel to Eastern Distributor.
SURFACE TRANSIT	• Rationalise bus layover spaces in the City Centre. • Improved bus priority on key corridors. • Increased bus through routing.	• Improved Harbour Bridge bus links. • Botany Road transit corridor.	• North-south light rail loop. • Harbour Bridge northbound bus lane. • Northern Interchange. • Southern Interchange.
REGIONAL TRANSPORT PROJECTS		• Full electronic tolling on Harbour Bridge which enables improvements to Cumberland Street. • Metro rail, North-West.	• Metro rail, West. • Metro rail, South-East. • Second Harbour Crossing.
OTHER SUSTAINABLE SYDNEY 2030 PROJECT IDEAS SUPPORTED BY THESE MEASURES	Three City Squares: • Circular Quay • Sydney Square • Central Station Precinct	• George Street pedestrian spine —First Phase. • Improving Botany Road as a liveable street. • Haymarket Activity Hub.	• Linked City Squares. • Revitalised Western Corridor. • Undergrounding of Western Distributor. • Remove the Cahill Expressway.