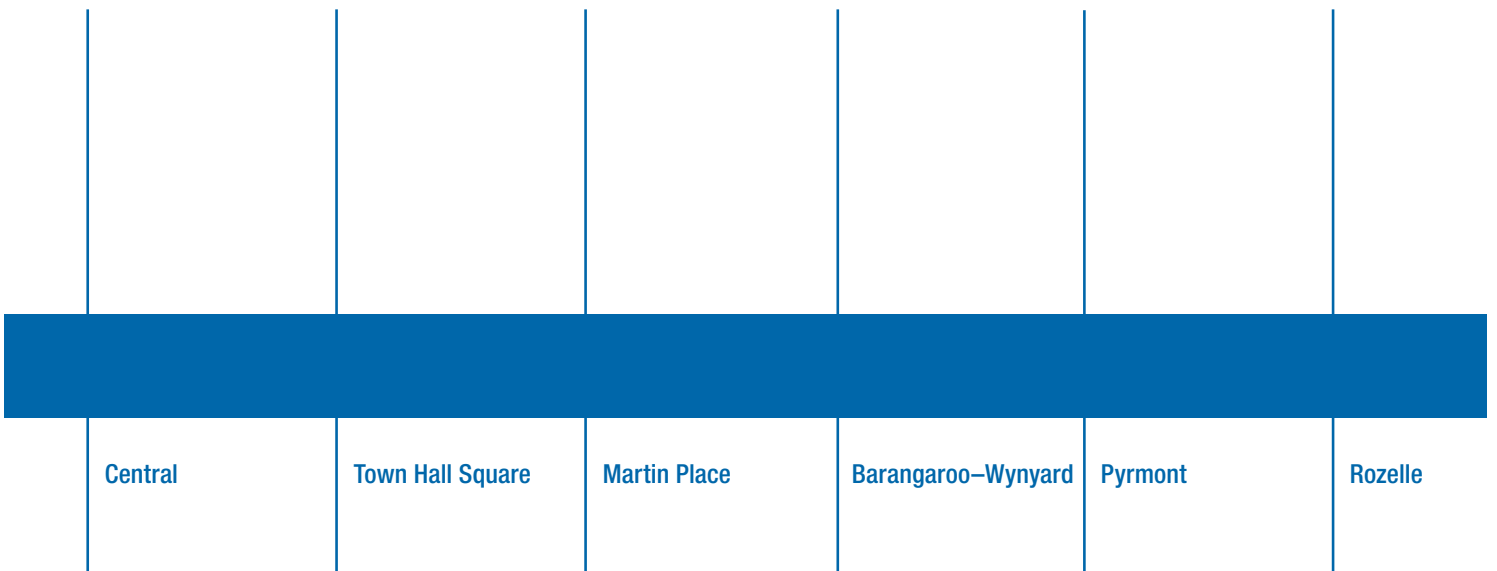




Technical Paper 6

Economic and social assessment



CBD Metro

Environmental Assessment

Technical Paper 6 – Economic and Social Assessment

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This report is to be read in conjunction with the Environmental Assessment for the Sydney Metro Network Stage 1 (CBD Metro) project dated September 2009.

The project as described within the Environmental Assessment will prevail in the event of any inconsistency with the project as described in the following document.



Glossary of Terms and Abbreviations

Abbreviations

Australian Bureau of Statistics	ABS
Census Collection District	CCD
Development Control Plan	DCP
Economic Impact Assessment	EclA
Environmental Impact Assessment	EIA
Greater Metropolitan Area (Sydney, Illawarra & Hunter)	GMA
Gross Domestic Product	GDP
Local Environmental Plan	LEP
Local Government Area	LGA
NSW Department of Planning	DoP
Preliminary Environmental Assessment	PEA
Social Impact Assessment	SIA
Statistical Local Area	SLA
Transport Data Centre	TDC

Definition of Terms

Greater Sydney Metropolitan Area – Refers to the area covering the Sydney Statistical Division, Illawarra, Central Coast and Newcastle localities.

Sydney Statistical Division (SD) or Region – Refers to the 43 LGAs of the Sydney Metropolitan Area and Central Coast.

City of Sydney LGA - Refers to the area administered by the City of Sydney Council including the suburbs of Alexandria, Beaconsfield, Camperdown (in part), Centennial Park (in part), Chippendale, Darlinghurst, Darlington, Dawes Point, Elizabeth Bay, Erskineville, Eveleigh, Forest Lodge, Glebe, Haymarket, Millers Point, Moore Park, Newtown (in part), Paddington (in part), Potts Point, Pyrmont, Redfern, Rosebery (in part), Rushcutters Bay, St Peters (in part), Surry Hills, Sydney, The Rocks, Ultimo, Waterloo, Woolloomooloo and Zetland.

Sydney CBD – Refers to one of the five precincts which make up the City of Sydney LGA. Sydney CBD extends southwards for about 3 kilometres from Sydney Cove to the area around Central Station. It is bound on the east side by a chain of parkland, and the west by Darling Harbour.



Statistical Local Area (SLA) - a small geographic area that comprises of a number of suburbs or postcodes. An SLA is usually equivalent to the boundaries of a local government area unless it does not fit entirely within a Statistical Subdivision.

Travel Zone - a small geographic area used as the basis for Transport Data Centre (TDC) modelling and data analysis. Travel Zones provide a level of analysis between Census Collection District (CD) and Statistical Local Areas (SLA) as defined by the Australian Bureau of Statistics.

Census Collection District (CCD) - the smallest geographic area defined in the Australian Standard Geographical Classification (ASGC). It can be defined as an area which one census collector can cover delivering and collecting census forms in a specified period. On average there are about 150 - 250 dwellings per CCD.

Director-General's requirements - Requirements for an environmental assessment issued by the Director-General of the Department of Planning in accordance with the Environmental Planning & Assessment Act 1979.



1 Executive Summary

1.1 Introduction

The Organisation for Economic Co-operation and Development (OECD) recognises that *“it is public transport that will be making our cities accessible and attractive in the 21st century¹”*. The NSW Government recognises the merits of improving the capacity of the states public transport network as an impetus for urban growth, and a means of increasing productivity and reducing costs to businesses. The economic advantages of transport infrastructure investment, coupled with the social benefits, enhance the liveability of cities through environmental improvements, better access to employment, education, social activities and cultural spaces.

The value of the matters outlined above has become all the more important in the context of the current global recession and forecasts for Australia’s economy to contract by half a percent in 2009 with unemployment reaching 8.5% by 2010-2011². The need for new integrated transport options must also be addressed in light of the significant resident and employment forecasts for growth in inner city areas and the increasing shift away from car usage owing to urban congestion and rising fuel prices.

The influence of a new metro system is not only evident at a macro level but across a spectrum of geographic scales and time periods. It is therefore important when assessing the economic and social impacts of an infrastructure project (such as the CBD Metro) to assess the range of impacts, their scope and degree of significance at various project stages. It is through this holistic approach that a thorough understanding of an infrastructure project’s economic and social impacts can be understood and the net benefits and costs balanced.

“The Government is acting to provide a sustained boost to the economy now, while also supporting future economic growth by improving the quality and efficiency of Australia’s transport networks. More efficient transport networks mean reduced costs to businesses. At the same time, our cities will be made more liveable and sustainable, helping to support a growing population.”

Commonwealth of Australia, May 2009

1.2 Study Purpose

This specialist study assesses the likely social and economic impacts of the CBD Metro Project. The CBD Metro Project relates to the construction and operation of a 7 kilometre metro rail line between Central and Rozelle. The preparation of this study has been undertaken in response to the NSW Department of Planning Director General’s requirements for the project to include:

- *“consideration of local community (service, access and amenity) related changes during construction and operation and proposed measures to minimise these impacts; and*

¹ Infrastructure to 2030: Mapping Policy for Electricity, Water and Transport; Chp 6 Strategic issues for the Future Funding and Operation of Urban Public Transport Systems OECD 2007

² Access Economics, Business Outlook Report – First Quarter 2009 (April 2009)



- *details of utilities or properties impacted by the project, including in relation to acquisition, access and business viability.*³

1.3 What is an Economic or Social Impact?

An economic or social 'impact' affects the level of economic or social activity generated in a defined area either positively or negatively. The assessment of likely impacts resulting from a particular development proposal allows for the identification, prediction and where possible quantification, of impacts as either likely benefits or negative impacts.

Economic impacts may directly affect the economic well-being of an area's residents, the viability of businesses, workforce availability or trade by changing factors that influence opportunities for employment or business growth, the ease of doing business and the environment in which business is conducted. Economic impacts may also alter the scope of demand for services and the level of accessibility to those services.

Social impacts may directly affect the social well-being of an area's residents, visitors and employees by changing the social amenity and character of an area, the degree of social interaction, the availability of employment, social perceptions and opportunities. Social impacts may also alter the level of demand for services and accessibility to those services. Consultation with a broad range of social groups, communities, individuals and other stakeholders should form part of a Social Impact Assessment to identify and understand these effects.

1.4 Study Scope and Parameters

The proposal would have varying influences at different stages of development and at different geographic levels. For simplicity we have identified three geographic localities for assessment within the Study Area:

1. The route corridor (60m wide) safeguarded by the SEPP (Infrastructure) 2007;
2. The station radii (i.e. an 800m radius or a 10 minute walk) from the CBD Metro stations; and
3. The suburbs and local government areas (LGAs) that the CBD Metro would transverse (i.e. the City of Sydney and Leichhardt LGAs).

This study refers to the various types of likely impact as either:

1. Positive or negative;
2. Significant, moderate, slight or neutral;
3. Direct or indirect; and
4. During construction and / or operation of the CBD Metro.

³ Director General Requirements Dated 27/02/09

1.5 Assessment Approach

In accordance with the Director General's Requirements, this study has been broken down into three components being:

1. The macroeconomic or wider economic impacts of the project to Sydney's economy;
2. The microeconomic impacts of the project in order to detail the properties impacted by the project through acquisition or as a result of changes to access and business viability; and
3. The likely social impacts of the project in order to consider changes to services, access and amenity as a result of the project.

The assessment of these three components has been supported by background research including information reviews, the analysis of demographic profiles, travel and survey data and the preparation and implementation of a community, business and stakeholder consultation programme.

1.6 Overview of Social and Economic Impacts

As an economic unit, a successfully functioning city relies on the effective operation of a range of complex parameters - transportation infrastructure is one such parameter. The CBD Metro would support capacity improvements to Sydney's existing transport network thereby increasing the scale of the workforce that could access Sydney CBD using sustainable travel options. These benefits would have positive wider economic merits including enhanced opportunities for business agglomeration and therefore economic innovation and productivity, as well as a reduction in the level of road network congestion with a corresponding reduction in the associated economic and social costs. Wider economic impacts would also relate to the generation of economic multipliers on account of investment in a major new form of public infrastructure, as well as the direct and indirect generation of employment.

"Public transport in Sydney is behind the times. We need something like this to become a global city."

(Sydney CBD worker)

In the short term, not all of the economic impacts of the project would be positive. The construction of the CBD Metro would temporarily negatively affect the day to day operation of numerous businesses located within the station radii, project corridor and suburbs through which it would pass. These impacts would range from acquisition and/or relocation of businesses, to construction related disturbances. Likely impacts to businesses would include: noise, dust and vibration, disruptions to traffic and pedestrian movements, changes to levels in passing trade and customer access, business servicing facilities and travel times.

The scope and significance of the project's social impacts would vary. For the most part, during construction, impacts to the Study Area's sensitive receivers would be negative, whilst upon operation the majority of impacts would be positive.

"There will be considerable disruption during construction, but in the end it is better for Sydney"

(Sydney CBD worker)

During the construction phase the negative impacts of the project would primarily relate to increases in the level of noise and traffic congestion. These disturbances are likely to affect daily activities such as travel to work, the use of some public spaces in the station radii, and the availability of some community and cultural services.



During the operational phase, a variety of social benefits would result from the CBD Metro owing to the associated improvements in travel speed, reliability, accessibility and connectivity. Benefits include better access to employment and education opportunities, social and community services, and cultural activities. Other benefits relate to reduced traffic congestion, increased opportunities for physical activity and social interaction, and improvements to the quality and character of the urban environment.

1.7 Specific Macroeconomic Issues

The following section summarises the likely macroeconomic or wider economic impacts of the CBD Metro during both the construction and operational phases of the project.

Agglomeration – Business productivity increases in line with the density of a city⁴. The project would support the clustering or agglomeration of businesses within Sydney CBD through improvements to the capacity of its transport network and therefore the availability of a larger local workforce. This would be a moderate positive economic impact of the project.

Congestion – Road congestion generated a \$3.5 billion avoidable cost for Sydney in 2005⁵. If left unmitigated the cost could increase for Sydney alone to \$7.8 billion by 2020. The project has the potential to support a modal shift away from private car usage and the associated growth of road based congestion, reducing the affiliated economic and socio-economic costs. This would be a slight positive economic impact of the project.

Efficiencies – Improvements to the efficiency of public transport infrastructure can have a positive correlation with economic output. Research studies have found that a 1% increase in capital infrastructure investment (such as the CBD Metro) could lead to a 0.4% increase in economic output⁶. This would be a slight positive economic impact of the project.

Economic Multipliers – The construction of infrastructure projects can have a positive economic flow on benefit to industries as a result of the multiplier effect. Multipliers refer to the level of additional economic activity generated by a source industry. Based on construction industry multipliers⁷, the estimated \$4.3 billion construction cost of the project would generate approximately \$12.3 billion in wider economic activity. This would be a moderate positive economic impact of the project.

Land Values - Research⁸ suggests that land values are likely to increase in response to transport infrastructure improvements in inner city areas as people would be willing to pay more to live in accessible locations. Dependant on the perceived travel benefits of the CBD Metro, land values in some station radii may be positively influenced by the project. This would be a slight positive economic impact of the project.

Employment - The project would generate employment during construction and during operation. Based on Sydney Metro estimates, the number of jobs generated by the project during construction would peak in 2013 at 3,070 jobs. Upon completion, an estimated 275 permanent jobs per annum

⁴ Rosenthal, S and Strange, W (2004) "Evidence of the Nature of the Sources of Agglomeration Economies" Handbook of Urban and Regional Economics

⁵ Department of Urban Transport and Regional Services, Bureau of Transport and Regional Economics: Estimating Urban Traffic and Congestion Cost Trends for Australian Cities, Working Paper No.71

⁶ Otto, G and Voss, G (1995) Public Infrastructure and Private Production

⁷ Australian National Accounts: Input-Output Tables 1996-97 (5209.0), Price Index of the Output of the Building Industry - Producer Price Indexes (6427.0), CPI All Groups - RBA Bulletin (Table G2)

⁸ Bajic, V. (1983). "The Effects of a New Subway Line on Housing Prices in Metropolitan Toronto." Urban Studies 20(147-158).



would be generated by the operation of the CBD Metro. This would be a slight positive economic impact of the project.

1.8 Specific Microeconomic Issues

The following section summarises the likely microeconomic impacts of the CBD Metro during both the construction and operational phases of the project.

Property Acquisition - To enable the construction of the project it will be necessary to acquire approximately 33 properties within the station radii across the project. The properties provide a mix of commercial, residential and community uses representing approximately 160 business occupants⁹. This would be a moderate negative economic impact of the project.

Sydney Metro will use every effort to acquire the necessary properties through negotiated purchase. Where negotiation fails, properties will be acquired through compulsory acquisition in accordance with the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991*. The aforementioned act requires appropriate compensation to be paid including associated legal costs, valuation fees, relocation and removal expenses, and mortgage costs. For residential acquisitions, solatium is also applicable, which is compensation for the non economic costs attributed to moving residence.

Sydney Metro has confirmed a commitment to work closely with the affected parties to identify alternative location options. In some cases, it will be necessary to provide additional support owing to the age or special needs of residential tenants or the important social service provided by some facilities. These requirements will be assessed on a case by case basis.

Employment Displacement - As a result of the necessary property acquisitions, over 160 business tenants would require relocation to facilitate the construction of the project. It is conservatively estimated that these businesses directly generate in the order of 3,350 jobs. An overwhelming share (an estimated 94%) of these jobs are based within Sydney CBD. It is considered likely that the vast majority of these businesses would choose to relocate within Sydney CBD owing to the benefits of agglomeration, the prestige of the address, and the accessibility to other services, businesses and clients / customers. Accordingly, the majority of these jobs would not be lost on account of the project, rather redistributed within Sydney CBD.

Some displaced businesses within Rozelle and Pyrmont may choose to relocate to alternative commercial or retail premises. The small scale of some of these businesses may result however in a proportion choosing not to relocate and therefore be extinguished. Given the modest scale of these businesses, the corresponding loss of jobs would be slight and should be balanced against the moderate level of direct and indirect employment generated by the project.

Business Impacts - The likely impacts of the project to the economic viability of businesses in the Study Area would vary dependant on the stage of the development, the location of the business, the type of business, and the severity of the impact.

For the majority of businesses affected, during construction, the impacts would be negative. Conversely, upon completion of construction and during operation of the CBD Metro, the majority of business impacts would be positive. There are exceptions however to these general conclusions dependant on the nature of the business and its location.

During the construction phase potential negative business impacts to turnover and thus economic viability were identified as:

⁹ Sydney Metro Estimates June 2009



- Construction related noise and vibration disturbances;
- Impediments to staff and customer accessibility, parking and business servicing as a result of temporary street closures, traffic redirections, traffic congestion and construction;
- Changes to the level of passing trade and the visibility of businesses to customers as a result of pedestrian or traffic route changes, construction hoardings and equipment;
- Structural impacts to buildings as a result of adjacent construction works; and
- Changes to the amenity of local areas (i.e. noise, visual impacts and air quality) and therefore the attraction, enjoyment and effectiveness of working, shopping or travelling in those areas.

Some positive impacts on businesses may stem from the construction phase including:

- Enhanced passing trade and visibility owing to temporary changes in customer travel routes; and
- Increased trade and / or demand for businesses providing a service or goods to the construction industry (i.e. food and beverages), staff recruitment and materials.

During the operational phase of the project, businesses will benefit from:

- New business opportunities generated within stations or by developments surrounding stations;
- Enhanced customer and staff access thereby increasing both trade and productivity; and
- A reduction in traffic delays and costs associated with vehicle operations and staff travel times.

During the CBD Metro's operational phase, a small number of existing businesses may be negatively affected by:

- Increased competition from new businesses located within or around stations;
- A potential increase in commercial rent for locations in close proximity to high footfall areas around the stations; and
- Changes to customer behaviours during construction (such as travel routes) that are retained post construction.

1.9 Specific Social Issues

The following section summarises the likely social impacts of the CBD Metro during both the construction and operational phases of the project.

Accessibility and Travel Times – The scale and concurrency of the construction works have the potential to negatively affect the ease and duration of travel to, and within the city, owing to construction related disturbances and traffic generation. This would be a moderate negative impact to be addressed through appropriate mitigation. Upon operation of the CBD Metro, there would be some access improvement to parts of Sydney CBD from suburbs such as Rozelle and Pyrmont. The main benefits upon operation would however relate to enhanced transport capacity and therefore ease of access and travel speed to locations across the City.

Access and Social Equity – The CBD Metro would enhance accessibility and social cohesion as a result of its fully accessible design and comparable cost to existing public transport. In these ways the CBD Metro would cater to the broad range of social groups residing and working in the Study Area equally.



Property Acquisition – It will be necessary to acquire residential dwellings, businesses and part of some community facilities to enable the construction of the project. This would have a significant negative social impact to various owners and tenants. Careful management of the process, proactive planning and consultation, the provision of fair and reasonable financial compensation, and social support would assist in minimising the resulting social impacts. The temporary closure of some businesses services during relocation would reduce the range of retail and commercial services provided to the local community during that period. A review of businesses affected has identified however a range of alternative options across the Study Area thereby minimising the degree of this impact.

Access to Public Spaces and Places – Various public spaces and places would either be used or affected by the construction works. This would have a moderate negative impact on the amenity of the users of the space during the construction period. The location and design of station related buildings (i.e. entry and exit points) should be carefully considered so that they do not negatively affect the use or effectiveness of surrounding spaces as places for social congregation or leisure. Whilst not part of the project application, the CBD Metro would support the provision of a new public square at Town Hall that would provide indirect social benefits.

Access to Community and Public facilities – The project would influence the operation of two community based facilities. Part of the open space associated with one facility would be required to form part of a construction site. Notwithstanding this negative yet temporary impact, careful management and support during the process would reduce the degree of impact. Sydney Metro have undertaken a commitment to work with the affected property owners and services to ensure their needs are addressed on a case by case basis and minimal disruption occurs to their level of service provision.

Impacts to Social Amenity – The construction and operation of the CBD Metro has the potential to negatively affect the amenity of sensitive receivers, particularly those located within the station radii and in the vicinity of the stabling and maintenance depot. The likely disturbances to amenity during the construction phase would be greater than the operational phase. The moderate negative disturbances would include noise, vibration, air quality, light spill and traffic impacts. Upon operation, potential impacts relate to noise and vibration generated by project related equipment.

Visual Amenity – The project would have a negative impact during the construction phase in some locations owing to the central and highly visual locations of the construction sites and the use of heavy plant, lighting, acoustic barriers and hoardings. Upon operation (and subject to appropriate design) the project may contribute positively to the visual amenity and integration of public spaces and places.

The Perception of Safety – The perceived safety of station locations would play a significant role in the effective use of the CBD Metro. The perceived security and safety of using these areas should be addressed through the design of stations so that they accord with the NSW Police Crime Prevention through Environmental Design (CTPED).

Access to Employment and Education – The project would have a social benefit by directly generating employment during both the construction and operational phases. It would also enhance the ease of travel and connectivity to Sydney CBD as a major employment and education destination.

Health and Well Being – The construction of the project could temporarily, negatively affect the mental and physical health and well being of social groups within the Study Area as a result of concern over changes, especially if connected with acquisition and potential noise and vibration disturbances, especially those occurring during the night time. Upon operation the predominant health impacts would be positive through traffic reductions and greater opportunities to walk to and from modes of public transport. The project would also enhance opportunities for social interaction by encouraging people to use public means of transport as opposed to private.



1.10 Objectives and Strategies

The following Section provides a number of key objectives to support the detailed design of the project and the development of strategies to minimise the social and economic impacts of the project.

Objective 1: Minimise the potential impact of the project to the operation of businesses and enjoyment of private and public spaces across the Study Area. This objective is to be achieved by proactively, working with potentially affected stakeholders to identify likely impacts in advance and put in place measures to minimise impacts. Any mitigation strategy should be regularly reviewed and monitored to ensure it is effective.

Objective 2: Ensure businesses, services, residents and social groups are kept informed of the project and consulted in advance of major works or factors that will have a direct social or economic impact.

Objective 3: Design stations so that their character and layout are sensitive to the local context and integrate effectively with existing uses. Ensure stations support the active use of surrounding areas and do not hinder the effectiveness of spaces as places of social congregation, activity or commuting.

Objective 4: For properties identified for acquisition, demonstrate there are no reasonable alternatives.

Objective 5: Sydney Metro to work closely with owners of properties to be acquired and tenants to be relocated to minimise related concerns and anxiety as well as any likely negative financial and social impacts. Prepare relocation plans that will support the identification of suitable alternative premises, minimise the disturbance of relocation and ease the settlement of business tenants and residents into new properties.

Objective 6: Ensure the CBD Metro Stations are fully accessible for persons with a range of mobility needs and have a comparable cost of use to other forms of public transport so that they represent equitable transport to all users.

1.11 Mitigation and Management

In light of the negative economic and social impacts identified by this study, a range of mitigation measures have been recommended (and summarised below) to minimise or ameliorate the impacts discussed above.

The majority of measures that have been recommended will assist in minimising both the social and economic impacts. Some measures are however specific to either specialist discipline.

1.11.1 General Recommended Mitigation Measures during Construction

During construction the following methods of mitigation are recommended in order to minimise the likely negative economic and social impacts of the project to an acceptable level.

- Provide a **24 hour toll free number** during construction to ensure a prompt response can be given to 'out of office hours' construction related matters.
- Retain Sydney Metro **Place Managers** as contacts for the community yet expand their remit so that they also become a point of contact for business queries and information during construction.
- Undertake property acquisitions and provide **appropriate compensation** in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.



- Undertake **pre-construction dilapidation asset surveys** of buildings in close proximity to construction sites in order to assess and monitor any potential impacts to building structures.
- Prepare a **Framework Construction Traffic Management** and establish a **Traffic and Transport Liaison Group** that addresses a range of related matters including, but not limited to: construction related traffic; disruptions to pedestrian and cycle networks; disruptions to other modes of public and private transport; car parking availability and business servicing requirements.
- Prepare a **Framework Construction Environmental Management** and **Construction Method Statements** that addresses a range of construction related matters including, but not limited to: construction site safety and management; construction disturbances and impacts to the amenity of sensitive receivers; impacts to air quality; impacts to the use of public spaces; potential disruptions created by construction related activity and site operations to business operations and the impact of construction sites to the visual amenity of the Study Area.

1.11.2 General Recommended Mitigation Measures during Operation

During the operation of the CBD Metro the following methods of mitigation are recommended in order to minimise any negative economic and social impacts of the project and to maximise the benefits.

- The **regular maintenance** of rolling stock and infrastructure to ensure air and ground borne noise levels and disturbances (as a result of train movements and related equipment usage) are kept to a minimum.
- The design of stations in accordance with the NSW Police Crime Prevention through Environmental Design (CTPED) strategy to provide **safe and secure environments** for users that minimises the potential for vandalism.
- Station design, access to stations and rolling stock to be **fully accessible** and wheel chair compliant. Station designs to incorporate tactile tiling and signage for sensory impaired persons.
- The implementation of **permanent mitigation measures** to minimise impact to sensitive receivers surrounding the CBD Metro stabling and maintenance facility and stations, particularly during evening periods.
- The implementation of station designs and **Construction Method Statements** that include a tunnel and station ventilation system to ensure air is well dispersed and does not affect any sensitive receivers above ground.

1.11.3 Specific Recommended Economic Mitigation Measures

The following measures are recommended to mitigate the specific, likely economic impacts of the project during construction.

- Prepare a **Consultation Involvement Plan** that facilitates ongoing correspondence and the notification of matters to affected businesses during the construction phase. The plan should also identify effective means for ongoing cooperation and communication with the business community.
- Prepare a **Business Management and Assistance Strategy for Construction** that proactively identifies businesses that may be adversely affected by the project and suitable alternative premises for business owners, service providers and tenants to be relocated as a result of the construction of the project. The strategy should provide alternatives in terms of unit type, price points and locations to meet the range of business requirements and to streamline the process for affected parties. The Strategy should also include measures that minimise the impact of the project to the effective operation of businesses including a Retail Support Program. The Retail Support



Program should provide assistance to smaller retail businesses that may be adversely affected during the projects construction.

- To mitigate the specific likely economic impact of the project during operation it is recommended that the master planning of the stations are subject to a **Design Review Panel** and seek to create attractive environments that integrate effectively with existing land uses and provide a range of business opportunities.

1.11.4 Specific Recommended Social Mitigation Measures

The following mitigation measures are recommended to mitigate the specific, likely social impacts of the project during construction.

- **Exhibition of the project application and Environmental Impact Assessment** to provide clarity and certainty of the project details and likely impacts.
- Implementation of an effective and thorough **Community Involvement Plan**. The plan may seek to establish Community Consultation Groups in key areas for ongoing correspondence and information sharing during construction. The group would also assist in the effective dissemination of information to the broader community, monitoring of impacts and the effectiveness of mitigation measures.

The following mitigation measures are recommended to mitigate the specific, likely social impacts of the project during operation.

- The master planning of stations and station sites in association with a **Design Review Panel** to create attractive environments that integrate effectively with existing land uses and enhance the attraction of walking to and from the CBD Metro stations (thereby improving opportunities for physical exercise).
- **Master Planning** to enhance the integration of places (such as East and West Darling Street, Lilyfield and Rozelle as well as parts of the CBD) through the provision of pedestrian bridges, cycle networks and pedestrian paths.



2 Introduction

2.1 Study Brief

The CBD Metro has been declared a Critical Infrastructure project (in accordance with Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act)) as it is considered essential for the State of NSW for economic, environmental and social reasons.

The following Economic Impact Assessment (EclA) and Social Impact Assessment (SIA) have been prepared by Hill PDA to form part of the Environmental Assessment of the CBD Metro. The wider environmental assessment work has been undertaken by SKM and Manidis Roberts on behalf of Sydney Metro, the proponent of the project.

This assessment provides a profile of the geographic localities and businesses that are likely to be affected by the CBD Metro project. It assesses potential impacts during construction as well as operation, in addition to measures to mitigate negative impacts and enhance the benefits of the project.

The preparation of this EclA and SIA has had full regard to the NSW Department of Planning's Director General requirements for the Environmental Assessment to include:

- *“consideration of local community (service, access and amenity) related changes during construction and operation and proposed measures to minimise these impacts;*
- *details of utilities or properties impacted by the project, including in relation to acquisition, access and business viability.”¹⁰*

2.2 What is an Economic and Social Impact Assessment?

An economic or social ‘impact’ affects the level of economic or social activity generated in a defined area either positively or negatively. The assessment of likely impacts resulting from a particular development proposal allows for the identification (and where possible) quantification of impacts as either likely benefits or negative impacts.

Economic impacts may directly affect the economic well-being of an area’s residents, the viability of businesses, workforce availability or trade by changing factors that influence opportunities for employment or business growth, the ease of doing business and the environment in which business is conducted. Economic impacts may also alter the scope of demand for services and the level of accessibility to those services.

Social impacts may directly affect the social well-being of an area’s residents, visitors and employees by changing the social amenity and character of an area, the degree of social interaction, the availability of employment, social perceptions and opportunities. Social impacts may also alter the level of demand for services and accessibility to those services. Consultation with a broad range of social groups, communities, individuals and other stakeholders should form part of a SIA to identify and understand these effects.

¹⁰ Department of Planning, Director General Requirements, 27/02/09



The geographic range of an economic or social impact is dependant on the nature of the proposed development and its scope of influence. The geographic influence of an impact can range from individual dwellings or streets through to suburbs, LGAs, states and countries.

Analysis of likely economic or social impacts can be compiled into an Economic and Social Impact Assessment that estimates the consequences of a particular project to an economy or society. In addition to identifying impacts however, an impact assessment should recommend ways to enhance the positive effects and reduce or mitigate the negative ones.

2.3 Study Methodology

In order to prepare this Economic and Social Impact Assessment, the following methodology has been applied:

1. A review of relevant available project related research and information;
2. A profile of existing geographic areas and social groups that may be influenced by the project;
3. A consultation programme to engage with residents, employees, social groups, government organisations and other key stakeholders;
4. A scope of the likely changes / impacts that may occur as a result of the project;
5. Research of studies and literature establishing impacts of similar projects and issues;
6. Analysis of potential negative and positive impacts, and direct and indirect impacts during construction and operational stages in light of government objectives and strategies; and
7. The identification of plans and strategies for monitoring and managing the impacts during both construction and operational stages.

2.4 CBD Metro Project Description

The project that is the subject of this EclA and SIA relates to a 7 kilometre long CBD Metro network that runs underground between Central and Rozelle. Seven stations are proposed along the CBD Metro including one safeguarded future Station at White Bay. A stabling yard, depot and operation control centre will be located at the former Rozelle Marshalling Yards.

The CBD Metro will be a twin track system served by up to 13 metro trains. It will have the capacity to operate seven days a week and 24 hours a day. Initially however the CBD Metro will commence operating at 5.30am and cease at 12.30pm with the exception of Friday and Saturday nights when it will close at 1pm.



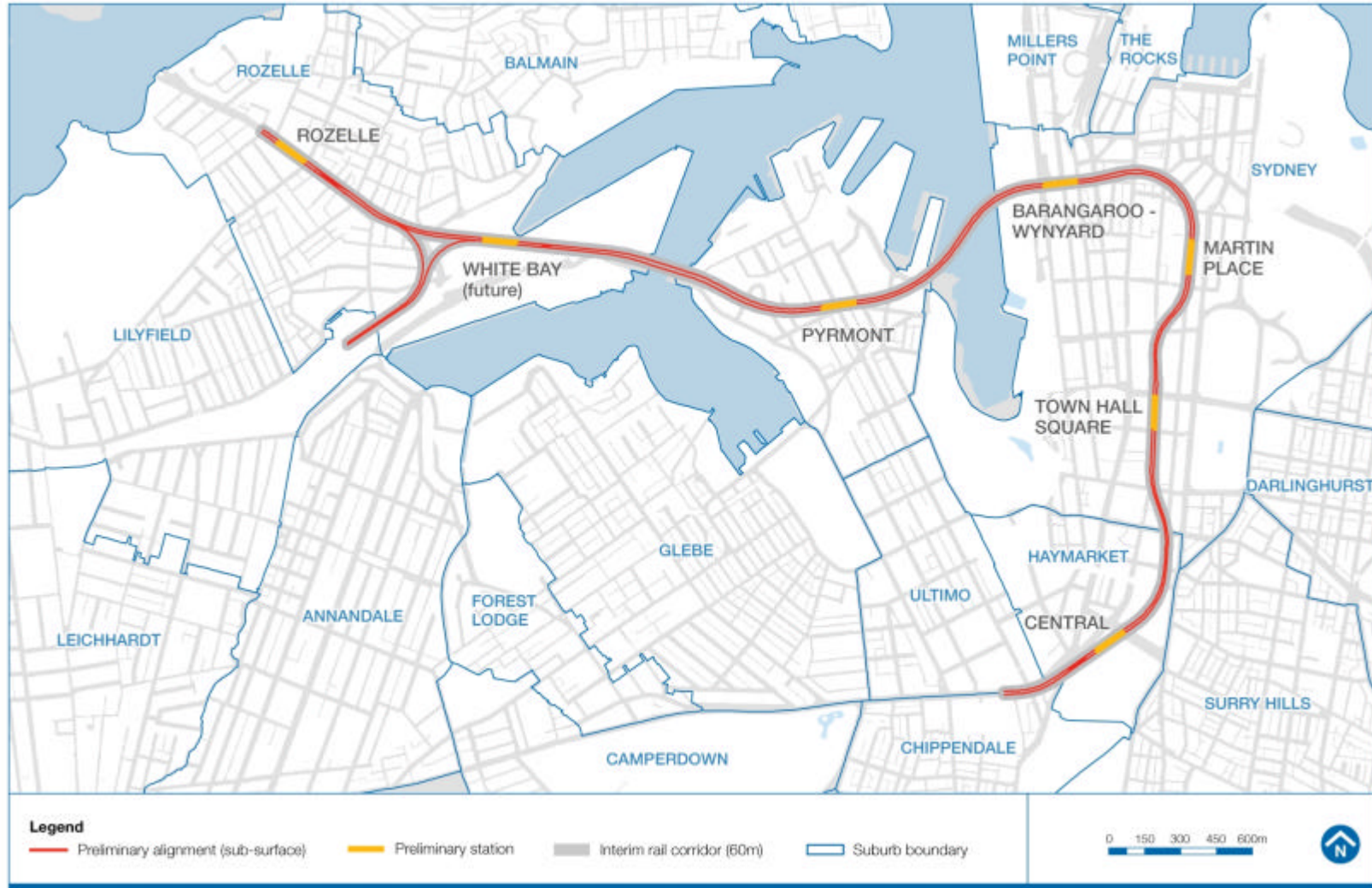
2.5 Study Assumptions

This study has been prepared on the basis of the following project assumptions:

- The project will be delivered in one stage with construction commencing in 2010 and completing in 2015;
- The CBD Metro will become operational in 2015 and provide a fast and reliable service every 2 - 3 minutes in peak periods;
- The cost of travel on the CBD Metro will be comparable, and in keeping with, existing public transport options;
- The project will have a construction cost of \$4.3 billion; and
- The project will follow the route alignment and station locations shown in Figure 2.1 below.



Figure 2.1 Proposed CBD Metro Route Alignment and Station Locations



3 Study Scope

As a 'State Significant' project, the geographic scope of the project ranges from the site specific through to broader social groups, suburbs, local government areas (LGAs), NSW and Australia.

The proposed development will have different influences at varying stages of development and at different geographic levels. For simplicity we have identified three geographic localities for assessment as follows:

1. The route corridor (60m wide) safeguarded by the SEPP (Infrastructure) 2007;
2. An 800m radius (or 10 minute walk) from the CBD Metro Stations; and
3. The suburbs and local government areas (LGAs) that the CBD Metro would transverse i.e. the City of Sydney and Leichhardt LGAs.

For reference purposes, the suburbs through which the proposed CBD Metro will pass, or be operated from, are referred to as the Study Area.

3.1 The Safeguarded Corridor

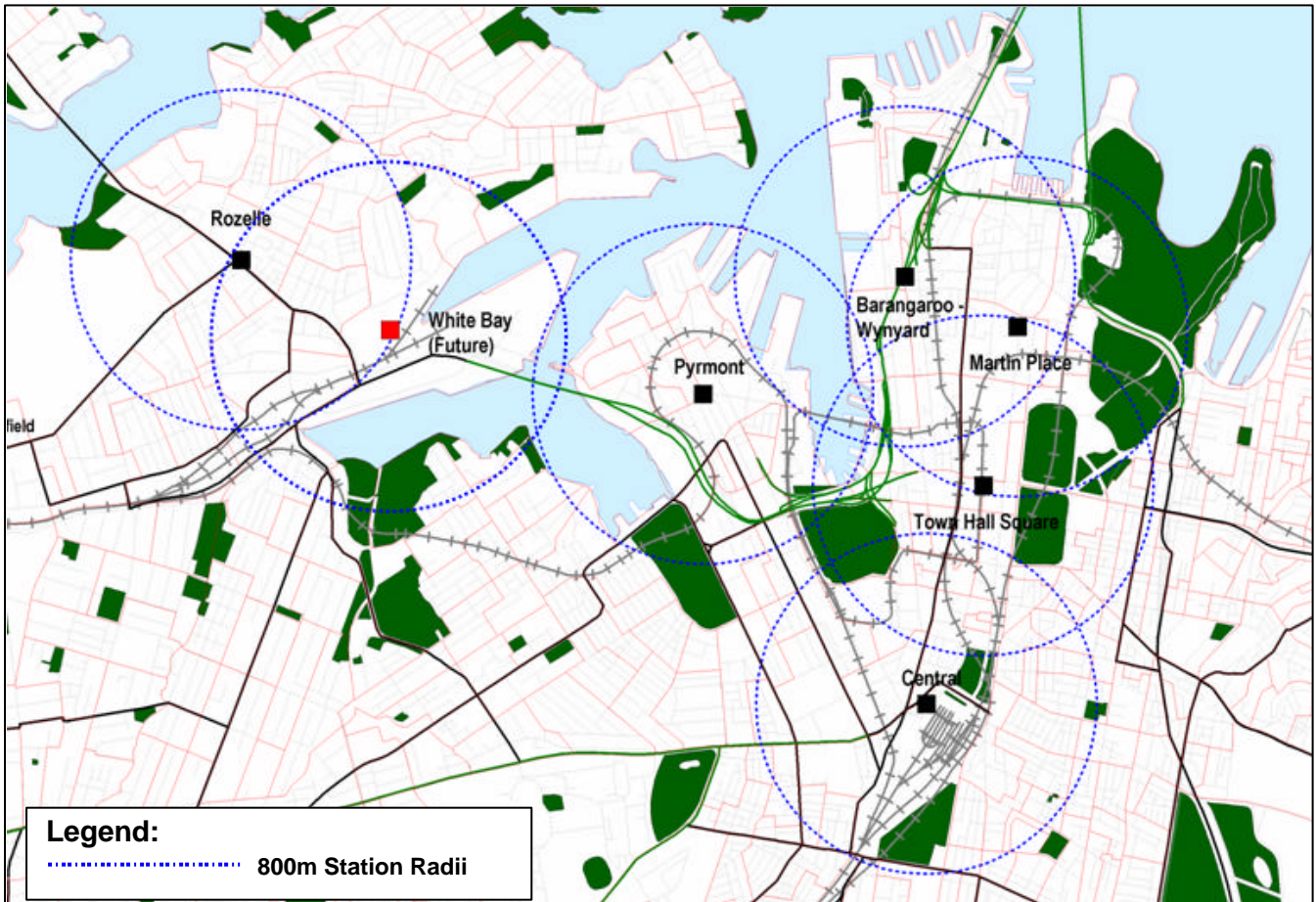
State Environmental Planning Policy (Infrastructure) 2007 identifies a rail corridor for the proposed CBD Metro. The corridor is 60m in width and extends from City Rail's Central Station to Rozelle and includes the former Rozelle Marshalling Yards between Lilyfield and Rozelle.

Over 600 properties are located within the safeguarded corridor. These properties include a mix of private residences, businesses and government agencies (i.e. RailCorp, SHFA and Sydney Ports).

3.2 Station Radii

An 800m radius has been established around each proposed station location as it represents a 10 minute walking distance. The 800m radius for each proposed CBD Metro station is shown in Figure 3.1 below.



Figure 3.1 Plan of CBD Metro Station Radii

Source: Hill PDA 2009

As at the 2006 Australian Bureau of Statistics (ABS) Census within:

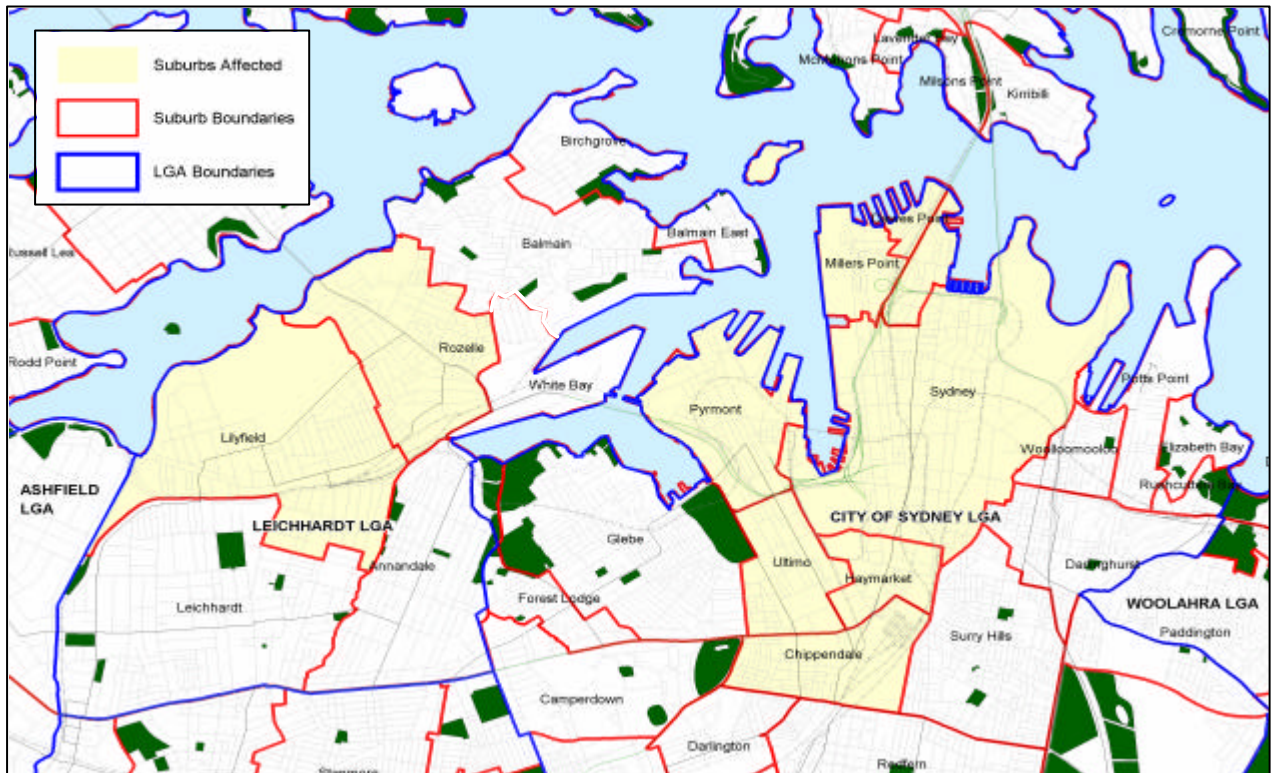
- The Central Station radius there was an estimated population of 25,300 residents and 10,400 of these residents were employed;
- The Town Hall Station radius there was an estimated population of 18,800 residents and approximately 6,700 of these residents were employed;
- The Martin Place Station radius there was an estimated population of 6,100 residents and approximately 2,100 of these residents were employed;
- The Barangaroo - Wynyard Station radius there was an estimated population of 6,400 residents and over 2,000 of these residents were employed;
- The Pyrmont Station radius there was an estimated population of 12,000 residents and over 5,500 of these residents were employed; and
- The Rozelle Station radius there was an estimated population of 11,000 residents and over 6,660 of these residents were employed.

It is important to note that in the case of the first four stations discussed above, the radii overlap. Taking this into consideration we estimate that over 61,000 residents (around 14,800 of which were employed) live within an 800m radius of the CBD Metro stations.

3.3 Description of LGAs and Suburbs

The following section describes the Local Government Areas that are likely to be influenced by the project. Figure 3.2 shows the location of the LGAs and suburbs in context.

Figure 3.2 Location Plan of Suburbs and LGAs



Note: White Bay forms part of Balmain Suburb
Source: Hill PDA

3.3.2 City of Sydney Local Government Area

The City of Sydney LGA covers an area of 26 square kilometres and is bound by Sydney Harbour to the north, the LGA of Woollahra to the east, Marrickville and Randwick LGA's to the south-west and south-east respectively and the LGA of Leichhardt to the north-west. The City of Sydney LGA comprises of a range of suburbs including Millers Point, Pyrmont, Woollahra, Darlinghurst, Haymarket, Ultimo and Sydney.

As of the 2006 ABS Census approximately 157,000 people resided in the LGA and 370,000 jobs were generated. The LGA has experienced significant growth over the past 10 years with a population growth rate of 4.9% per annum and employment growth rate of 11% per annum¹¹.

¹¹ City of Sydney Community Profile: Current Population Estimates and Working Population Profile



3.3.3 Chippendale

Chippendale is a traditional inner city suburb with a strong emphasis on residential dwellings, particularly in the form of terrace housing. The character of dwellings and street patterns reflect the early industrial character of the area and the dense inner city conditions that once prevailed. A sizeable portion of the historic fabric of Chippendale is protected as a Heritage Conservation Area.

Owing to the suburbs proximity to Sydney CBD, the associated employment and tertiary education institutions (i.e. the University of Sydney, University of Technology Sydney (UTS), and Technical and Further Education (TAFE)), the suburb has become 'gentrified' and is once again a popular location for students and city workers. The suburb is also renowned for its creative industries including design studios and shops.

3.3.4 Haymarket

The suburb of Haymarket is located to the immediate south of the suburb of Sydney and the Sydney CBD. Formerly characterised by its produce markets and warehousing, the suburb has now become renowned for Chinatown (focussed on Dixon Street) and the Sydney Entertainment Centre.

The suburb's proximity to Chinatown, employment and cultural opportunities, as well as tertiary education institutions, facilitates a diverse mix of residents with respect to age, socioeconomic status and ethnicity.

3.3.5 Sydney Suburb

The suburb of Sydney predominantly relates to the Sydney Central Business District (CBD) and includes areas such King Street Wharf, The Rocks and Circular Quay. The Sydney CBD performs a key role in the Sydney Region and NSW economy as the focus for local, national and international businesses. The City is dominant in the high value finance, administration, government and service sectors. It is also a focal point for tourist and culture related activities (hotels, libraries, cafes and museums).

The concentration of uses varies across the suburb with a greater focus on finance, insurance, business and property services in the northern part of the CBD. In the middle component of the city (i.e. around Town Hall), the character becomes more mixed between commercial offices (including some finance yet an increasing component of property and business services), food and clothing retail, hotels and residential uses. Further to the south (around Central Station) the area becomes more focused on specialised retail, and cultural and educational facilities in addition to creative industries such as media, advertising and production.

3.3.6 Pyrmont

Pyrmont is a dense inner city suburb providing a mix of residential, employment and tourist related uses. A former industrial and wharf related area, Pyrmont was earmarked for development under the commonwealth governments '*Building Better Cities*' initiative in the 1980s. The City West Development Corporation was established to plan the development of the area and disused government sites.

Focused around Harris Street and Union Square, the suburb may be defined as the area bound by the shoreline of Port Jackson to the north, Murray Street and Pyrmont Street to the east, Fig Street to the south, Wattle Street and Blackwattle Bay to the west.

The area has experienced rapid change since the 1990s developing into an information, technology and media precinct with several media organisations such as Nova, Channel 10 and the Fairfax Media



Offices. Major cultural and tourist related uses in Pyrmont include Star City Casino, Darling Harbour, Sydney Convention and Exhibition Centre, the Powerhouse Museum, the Lyric Theatre, the Sydney Aquarium and Australian National Maritime Museum.

3.3.7 Leichhardt Local Government Area

The Municipality of Leichhardt is located in the inner west of Sydney in close proximity to the Sydney CBD. The LGA has over 17 kilometres of frontage to Sydney Harbour and the Parramatta River. The LGA is also bound by the City of Sydney to the east, Marrickville to the south and Ashfield to the west.

The LGA covers an area of 10 square kilometres and as of the 2006 ABS Census had a population of 48,800 residents. There was an increase in population over the 10 years to 30 June 2006 of 4,178 people or 8.8% (0.8% per annum) in the LGA. Suburbs within the LGA include Leichhardt, Lilyfield, Balmain (including Balmain East), Birchgrove, Rozelle and Annandale.

3.3.8 White Bay

The Glebe Island and White Bay areas are located on the southern and western shores of White Bay directly opposite Pyrmont Point. White Bay was traditionally part of a regional shipping and rail hub. In recent years however many buildings and their associated infrastructure have been adapted to more contemporary industrial needs. Today the 40 hectare area is under the control of Sydney Ports and is considered by the organisation as a key facility in the NSW transport and logistics network.

3.3.9 Lilyfield

The suburb of Lilyfield is located within the LGA of Leichhardt and is bound by the suburb of Rozelle to the east, the City West Link Road to the south, Callan Park and Iron Cove to the north. The suburb benefits in many places from views of the harbour and Sydney CBD.

The predominant character of the suburb is smaller grain residential stock. It is served by a small retail centre known as Orange Grove Plaza. The suburb is also characterised by the Callan Park site that includes the former Rozelle Hospital and associated uses, community services and ambulance training centre. Callan Park provides significant open, passive recreational space for local residents.

3.3.10 Rozelle

The suburb of Rozelle is located in the north of Leichhardt LGA and is bound by White Bay to the south-east and Iron Cove to the north-west. Darling Street and Victoria Road are major vehicular routes through the suburb dividing it on an east-west and north-south basis respectively.

The suburb has a mix of residential, industrial and commercial uses. Focused along Darling Street and the intersection with Victoria Road is a range of retail, community and leisure services. Darling Street is accessed by many pedestrians and cyclists. Accordingly, Leichhardt Municipal Council seeks to preserve and enhance the pedestrian safety, amenity and focus of Darling Street and adjacent areas.

Residential development in Rozelle extends from the main road thoroughfares to the harbour. The character of residences varies from detached houses to terrace and unit dwellings on small lots with heights generally no greater than two storeys. The character of development in Rozelle is reflective of its history as an industrial suburb in close proximity to the Sydney CBD with a mix of housing for professional and non-professional workers alike.



4 Relevant Government Policies and Objectives

The following Chapter analyses the relevant Local and State Government Plans, Policies and Strategies to the project.

4.1 NSW State Plan – A New Direction for NSW

The NSW State Plan (2006) sets priorities for Government actions to meet the needs of the community. The Plan extends across a range of government organisations and seeks to coordinate actions between these organisations to achieve agreed targets. The plan is based on 14 long-term goals and 34 priority actions.

Relevant to this study is the plan's key priority to maintain and invest in infrastructure in order to support the growing economy. Other relevant goals and priorities relate to:

- Keeping people safe and creating harmonious communities through reducing rates of crime, reduced antisocial behaviour and increasing participation and integration with community activities;
- Creating a high quality transport system and increasing the share of peak hour journeys on a safe and reliable public transport system;
- Increasing prosperity across NSW by increasing business investment, investing in infrastructure, cutting red tape and getting more people participating in education and training throughout their life;
- Improving urban environments through cleaner air and reduced greenhouse gas emissions, by creating jobs closer to home, enhancing the affordability of housing and improving the efficiency of the road network; and
- Achieving a public transport share (for travel to work) within the Sydney metropolitan region of over 25% by 2016.

4.2 State Infrastructure Strategy 2008 to 2018

The Strategy covers a ten year period from 2008. The strategy identifies this period as the biggest capital investment period in NSW's history (approximately \$140 billion). The strategy identifies new and improved transport infrastructure projects to meet the priorities of the State Plan (discussed above). The Strategy recognises that:

“economic activity, with population growth and distribution, will be the primary drivers of transport infrastructure spending”.

4.3 Urban Transport Statement

The Urban Transport Statement provides a package of strategies to address population growth and other challenges facing Sydney from 2006 to 2031. The package represents over \$660m of investment that seeks to better integrate transport planning with land use planning, economic development, education and health. The Statement seeks to increase the reliability and availability of public transport across the Sydney Region.



4.4 The Metropolitan Strategy – City of Cities

The Metropolitan Strategy was prepared to facilitate the growth and development of Sydney as a Global City over a 25 year period

The Strategy identifies five specific aims as outlined below:

1. **To Enhance Liveability:** by ensuring a choice of housing suitable to demographic needs that are close to services and that protect the character of the environment and community;
2. **Strengthen Economic Competitiveness:** by increasing the city's competitiveness and sharing the benefits across the region;
3. **Ensure Fairness:** through access to jobs, services and lifestyle opportunities through the provision of aligned services and enhanced public transport close to where people live;
4. **Protect the Environment:** by reducing the city's use of natural resources and the production of waste;
5. **Improve Governance:** by improving the quality of decision making and community confidence.

Underpinning the five aims of the Strategy outlined above are seven strategies relating to: Economy and Employment; Centres and Corridors; Housing; Transport; Environment and Resources; Parks and Public Spaces; Implementation and Governance.

4.5 Inner West Subregion - Draft Subregional Strategy

The preparation of Subregional Strategies stems from the need to implement the aims, priorities and actions of the Metropolitan Strategy into local planning objectives and policies. The Draft Inner West Subregional Strategy was prepared for the locality that covers the LGAs of Ashfield, Burwood, Canada Bay, Strathfield and Leichhardt.

Of relevance to this study is the Draft Subregional Strategy's target of 12,500 additional jobs within the Inner West by 2031 of which 500 jobs have been targeted for Leichhardt LGA. The Strategy identifies actions to:

- Develop a strategic vision for the Bay's Precinct;
- Support centres with transport infrastructure and services;
- Plan for a housing mix near jobs, transport and services;
- Renew local centres (such as Rozelle and Balmain) to improve economic viability and amenity;
- Extend transport networks to serve growth (and investigate, plan and implement potential West Metro Line);
- Improve the reliability and capacity of rail services as well as the integration of public transport services;
- Improve transport decision making, planning, evaluation and funding;
- Improve Sydney's air quality and minimise exposure to unacceptable noise levels; and
- Recognise and build upon Sydney's cultural life.



4.6 Sydney City - Draft Subregional Strategy

Released in 2008 the Sydney City Draft Subregional Strategy seeks to secure an additional 55,000 dwellings in the Subregion and 58,000 jobs from 2004 to 2031. The Strategy was prepared for that area identified as the City of Sydney LGA.

Relevant to this study, some of the key challenges identified by the Strategy for Inner Sydney (or Sydney CBD) relate to the need to improve accessibility both within the CBD and to the rest of the metropolitan region. The strategy also identifies the need to successfully integrate new development sites (such as Barangaroo) with Sydney CBD.

The Strategy identifies actions to:

- Strengthen industry clusters;
- Concentrate activities near public transport;
- Plan for a mix of housing near jobs, transport and services;
- Investigate increased public transport capacity and protect corridors for high capacity public transport modes including the North West Metro line and other potential metro link projects;
- Improve interchanges, stations, bus stops and ferry wharves;
- Extend the rail and bus networks to connect centres;
- Extend transport networks to support growth;
- Improve reliability and increase capacity of rail services;
- Improve the integration of public transport;
- Align local walking and cycling networks with public transport routes to improve accessibility to public transport;
- Improve Sydney's air quality;
- Increase access to quality parks and public places; and
- Enhance cultural life and tourism precincts.

4.7 Local Government - City of Sydney

4.7.1 Sustainable Sydney 2030 – City of Sydney Strategic Plan, 2008

Sustainable Sydney 2030 is a Strategic Plan for the City of Sydney LGA. Following considerable community and stakeholder consultation, a vision for the city and a strategic plan was prepared to address the various economic, social and environmental challenges facing the growth and success of the city as a place of work, recreation and residence.

The Plan identifies 10 Strategic Directions as a 'framework for action'. Relevant to this study are the following directions:

1. A globally competitive and innovative city;
2. A leading environmental performer;



3. Integrated transport for a connected city;
4. Vibrant local communities and economies; and
5. Sustainable development, renewal and design.

Underpinning the 10 Directions is the vision for the centre to be “*Green, Global and Connected*”. This vision relates to the project in numerous ways including:

- Its ability to support and enhance sustainable travel;
- Promote economic growth and attract additional Global Firms to new parts of the City that are being developed; and
- Its ability to better connect people through accessible and integrated stations with other forms of transport and destinations.

4.7.2 City Plan

In accordance with the requirements of the State Planning Reform agenda and in response to the Council boundary changes that occurred in 2003 and 2004, the City of Sydney has been undertaking a review of all existing plans and policies. The review, additional research, analysis and projects will in turn deliver a new comprehensive Local Environmental Plan (LEP), Development Control Plan (DCP) and supporting information.

The comprehensive City Plan will pull together the four existing yet different sets of planning controls including:

- The Central Sydney LEP's and DCP's and Urban Development Plan;
- South Sydney LEP's and DCP's;
- Relevant components of the Leichhardt LEP and DCP's; and
- The Draft Green Square Town Centre LEP and DCP.

4.8 Local Government - Leichhardt Municipal Council

4.8.1 Leichhardt 2020+ Strategic Plan

The Leichhardt 2020+ Strategic Plan is an overarching plan for all of Leichhardt Municipal Council departments and services. The underlying theme through the document, relevant to this study, is the need for development to enable a “*sustainable and liveable community*” that meets “*the needs of the present without compromising the ability of future generations to meet their needs*”.

The Strategic Plan outlines Leichhardt Council's vision and key services and how the two integrate. The Strategic Plan also identifies how these factors may be implemented as well as how they relate to Council's Management Plan.

4.8.2 Leichhardt Town Plan

The Leichhardt Town Plan is a package of planning policies that principally comprises of the Leichhardt LEP (2000) and Leichhardt DCP (2000).



4.8.3 Development Control Plan 32 - Design for Equitable Access

DCP 32 estimates that close to 20% of the Leichhardt Community is in some way affected by a disability and in turn access. The DCP was prepared in light of best practice guidelines to highlight, encourage and support the provision of accessible design solutions and considerations into new development. DCP 32 also provides controls for the design of adaptable housing.

The policy was first adopted by Council in 1997 and has subsequently been updated twice. The most recent change occurring in 2003.

4.8.4 Leichhardt Municipal Social Plan, November 2004

The five year plan provides a strategic approach to the needs of the Leichhardt community. The plan was prepared following the implementation of a community consultation programme, demographic analysis and review of local services.

The plan addresses the needs and issues related to key target groups. These groups include children, young people, older people, women, people with disabilities, indigenous persons and people from culturally diverse backgrounds. Based on a Needs Assessment, recommendations are provided in the Plan for strategies, actions and implementation by Council and other organisations.

Discussions with Leichhardt Council have identified that the Plan is currently under review. The initial stages of preparing a new Social Plan for Leichhardt LGA have commenced with the audit of Cultural and Community Assets.



5 Demographic and Employment Profiles

The following Chapter provides a profile of the existing resident population and workforce located within the Study Area. The profile is a basis against which the likely social (including cultural) and economic impacts of the project can be considered and assessed.

This Chapter also quantifies the significant contribution the Study Area makes to employment generation in the Sydney Region. It also identifies the broad range of locations the Study Area's workforce travels from and their modal choice.

Finally this Chapter provides a forecast of the Study Area's population and workforce to assess its future scale and therefore influence to demand for travel and movement.

Two main sources of data have been used to inform the demographic and employment profiles provided in this Chapter being:

1. The Australian Bureau of Statistics (ABS) Census Data for 2001 and 2006; and
2. The Ministry of Transport, Transport Data Centre's journey to work data and employment and population forecasts (2008).

In accordance with these data sources, demographic and employment profiles have been prepared by LGA and suburb at the Travel Zone¹² and Census Collection District¹³ levels.

5.1 Existing Demographic Characteristics of Residents

The demographic profile of existing social groups within the Study Area was based on a review of 2006 and 2001 ABS Census Data. Where possible, a comparison was made to the 1996 Census Data. The following section summarises the key social characteristics of the Study Area's population, based on the detailed demographic analysis provided in Appendix A.

The analysis found that as of the 2006 Census, the LGAs of Leichhardt and Sydney had a resident population of over 205,000 people. This represented close to 5% of the population of the Sydney Statistical Division (SD). The suburbs influenced by the project (Sydney, Haymarket, Chippendale, Pyrmont and Rozelle) had a resident population of 63,000 people or 31% of the total population of the two LGAs.

The Study Area and suburbs potentially influenced by the project are characterised by their proximity to Sydney CBD, the CBD's role as the main employment generating centre within the Sydney Region, and the growing provision of higher density housing options. Accordingly, the resident population of the Study Area has a strong propensity towards:

- The key working ages of 15 - 44 years;
- Households occupied by couples without children;

¹² Travel Zone - a small geographic area used as the basis for Transport Data Centre (TDC) modelling and data analysis. Travel Zones provide a level of analysis between Census Collection District (CD) and Statistical Local Area (SLA) as defined by the Australian Bureau of Statistics.

¹³ Census Collection District (CCD) - defined as the area which one census collector can cover delivering and collecting census forms in a specified period. On average there are about 150 - 250 dwellings per CCD.



- Medium to high density dwellings;
- Residents born outside of Australia or Oceania; and
- Residents employed as a manager or professional.

These characteristics do however change markedly by suburb. By way of example, the suburb of Rozelle is characterised by a comparatively established community to the other suburbs profiled, with a greater share of its population under the age of 14 years yet a greater share of residents in the higher income brackets. The suburbs comparative difference to other suburbs located within the Study Area is also reflected by the higher proportion of families with children and the majority of residents being employed as professionals or managers.

Haymarket and Chippendale had a comparatively greater share of lower income households, unemployed residents and students than other suburbs. The proximity of these suburbs to Sydney CBD and recent gentrification has however meant that there is still a strong share of residents employed as professionals and managers earning within the higher income brackets.

Suburbs such as Pyrmont show a diversity of residents yet the majority are young professionals earning higher incomes and living in higher density dwellings.

The social and socio-economic characteristics of the Study Area reflect its dense inner city location and the diversity of social groups that are attracted to live within these areas. The proximity of the suburbs to the CBD is also reflected in the higher density of development, the predominance of the population within key working ages, and a fewer number of children households than compared to the Sydney SD.

5.2 Existing Employment Characteristics of Residents within Station Radii

This section addresses the next level of geographic detail relevant to this study, namely the station radii (i.e. an 800m radius or 10 minute walk). This assessment shows the types of jobs people living within the station radii are employed in and therefore indicates their need to access particular destinations for work.

Analysis of the data shows that a significant proportion (35%) of workers residing in the station radii were employed as 'Professionals' in 2006. The Rozelle radius had the greatest share (41%) of its labour force employed as 'Professionals'.

Within the professional category, workers residing in the station radii were more likely to be employed as 'Managers' or 'Clerical and Administrative Workers' than other professional occupations. Therefore, it can be assumed that the majority of residents within the station radii are likely to work within commercial centres. Given the proximity of these residents to Sydney CBD, it can be expected that the majority travel to Sydney CBD to work and therefore rely, for the most part, on public transport for travel.



Table 5.1 Residents by Station Radii Employment by Occupation

Occupation	Rozelle	Rozelle % of Total	Pymont	Pymont % of Total	"City Corridor"	"City Corridor" % of Total	Total
Managers	1,479	30%	1,104	23%	2,251	48%	4,834
Professionals	2,737	28%	2,004	20%	5,059	53%	9,800
Technicians and Trade Workers	450	23%	371	19%	1,113	59%	1,934
Community / Personal Service Workers	399	17%	482	20%	1,511	63%	2,392
Clerical and Administrative Workers	863	22%	857	22%	2,127	56%	3,847
Sales Workers	439	18%	448	19%	1,508	63%	2,395
Machinery Operators and Drivers	88	25%	76	22%	210	53%	374
Labourers	168	12%	197	14%	1,060	76%	1,425
Not Stated	24	12%	27	13%	153	76%	204
Inadequately Described	92	24%	76	20%	212	56%	380
Total	6,739		5,642		15,204		27,585

* Includes Barangaroo-Wynyard, Martin Place, Town Hall and Central Station Radii.

Source: Australian Bureau of Statistics, 2006 Census Data.

5.3 Employment Generated in LGAs

Based on ABS Census Data and the census question 'where do you work' it is possible to clarify the number of jobs and the characteristics of jobs generated within the City of Sydney LGA and Leichhardt LGA. This assessment will show the quantum of jobs by category generated within each LGA (compared to the Sydney SD) and hence the significant importance of these areas (particularly Sydney LGA) for employment generation in the Sydney Region.

The information to undertake this analysis has been sourced from the Ministry of Transport's Transport Data Centre (TDC). As the ABS Census (particularly employment related census questions) is generally subject to undercounting, the TDC makes adjustments to the ABS data accordingly. As a result, it is important to note that the TDC and ABS Census Data results will not always equate.

As at 2006, based on TDC data, 1,923,900 people were employed in the Sydney SD. The majority of these people were employed in Sydney CBD (12% or 230,000 persons). Over half of all jobs generated within the CBD were related to finance, insurance, professional, scientific and technical services. The CBD also enjoyed the most significant growth in jobs between the 2001 and 2006 Census years of any centre within the Sydney SD. The CBD was followed by Norwest and Macquarie Park¹⁴.

It was estimated that 14,236 jobs were generated within the Pymont / Ultimo area representing 0.7% of all jobs in Sydney SD in 2006. The majority of jobs generated within Pymont and Ultimo were within the arts, recreation, professional, scientific and technical services and information, media and telecommunications¹⁵.

Leichhardt LGA generated 17,814 jobs (0.9% of all jobs in the Sydney SD) whilst the suburb of Rozelle generated 2,662. Figure 5.1 shows that the greatest share of jobs within Leichhardt LGA were

¹⁴ Transport Data Centre, Transfigures December 2008

¹⁵ Transport Data Centre, Transfigures December 2008

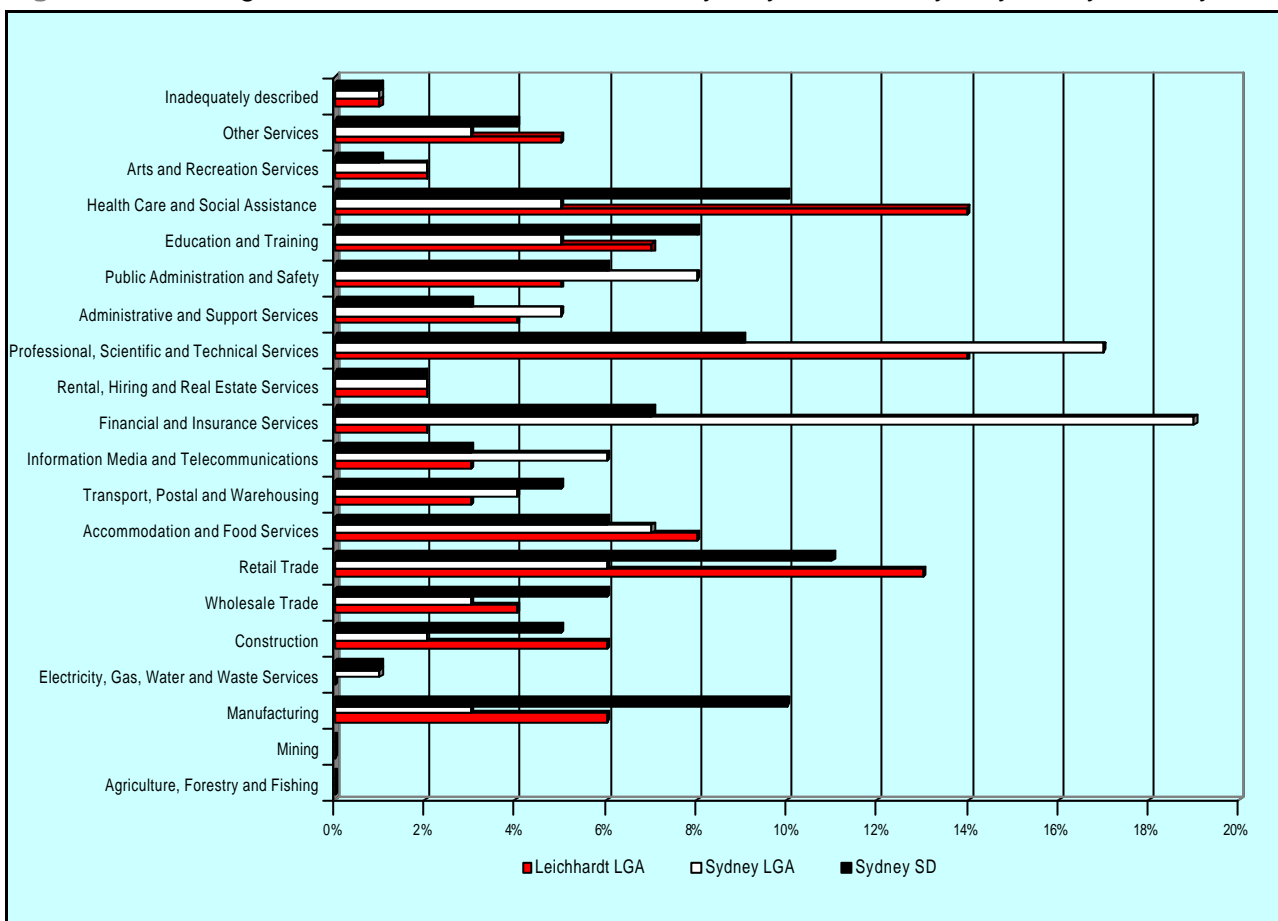


generated in professional, scientific and technical services (14%), followed by health care and social assistance (14%), and retail trade (13%).

For the City of Sydney LGA, the greatest share of jobs were generated in financial and insurance services (19%), followed by professional, scientific and technical services (17%), and public administration and safety (8%).

This analysis shows the significant contribution the Study Area, particularly Sydney CBD, makes to employment in the Sydney Region. It also shows that the overwhelmingly greatest share of jobs in professional industries such as telecommunications, finance and insurance services are based within Sydney CBD, hence the need for workers and clients from across the Sydney Region to access the CBD for these industries. The generation of, and access to, these jobs are critical to maintaining Sydney’s role as a global city and enhances the workforce availability in the CBD to the benefit of business clustering (to be discussed further in Chapter 7).

Figure 5.1 Jobs generated within Leichhardt LGA, Sydney LGA and Sydney SD by Industry



Source: TDC Statistics by Local Government Area

5.4 Forecast Population Growth

The following section profiles the forecast population growth within the LGAs and suburbs likely to be influenced by the project as well as the station radii. An assessment of population growth provides a better understanding of the growing need for transport within the Study Area and the growing pressure



on social resources. These forecasts inform the assessment of the projects likely social and economic impact during both construction and operational phases.

5.4.1 Forecast Population Growth by LGA

At the local government level, the main influences of population growth relate to the age of the resident population, the housing market (including the availability and pricing of housing) in addition to the population's demographic characteristics (fertility patterns, household types etc).

As discussed previously, Sydney's inner city areas have experienced significant growth over the past decade. Based on the City of Sydney Council's population forecasts this significant growth will continue.

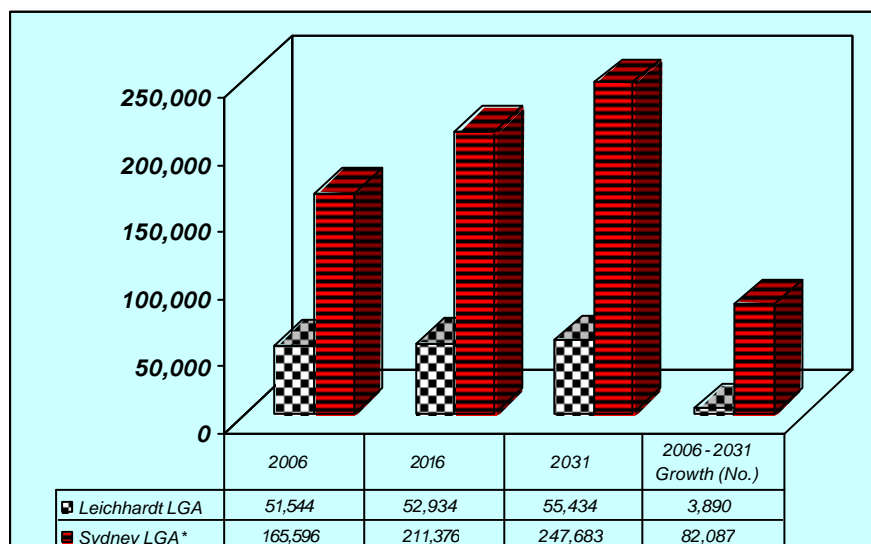
As of 2006, the City of Sydney LGA had an estimated population of 160,000. The City of Sydney LGA has a target of 48,000 additional dwellings to 2031. The majority of these dwellings will be developed within areas such as Barangaroo, Green Square, Pyrmont and Eveleigh.

Leichhardt LGA is a more established residential area with less potential to increase dwellings through redevelopment at greater densities. As a result, the Department of Planning established a lower target of 2,000 dwellings for Leichhardt LGA. Applying an average household occupancy rate of 2.2 persons per dwellings (based on 2006 Census data for Leichhardt); the 2,000 dwellings could result in an additional 4,400 residents in the LGA by 2031.

The TDC released population forecasts in 2008 that were based on the 2006 ABS Census Data. The TDC takes a 'top to bottom' approach designating forecast population growth within a broad area and distilling this down to the LGA, Statistical Local Area (SLA) and Travel Zone levels using a dwelling stock model. A plan of the Leichhardt and City of Sydney LGA and Travel Zone boundaries is provided in Appendix C.

Figure 5.2 shows the forecast population growth for Leichhardt and the City of Sydney LGAs to 2031. The graph shows a net growth of 3,880 residents within Leichhardt LGA to 2031, which is slightly lower than the forecast of 4,400 residents discussed above. The graph also indicates the substantial population growth forecast for the City of Sydney to 2031 (82,087 residents). The City of Sydney will experience close to a 50% increase in population from 2006 to 2031 based on TDC forecasts.

Figure 5.2 TDC Population Projections for Leichhardt LGA and Sydney LGA



Note: Sydney LGA includes the Sydney Inner SLA, Sydney East SLA, Sydney South and West SLA
Source: TDC Population Forecasts 2008



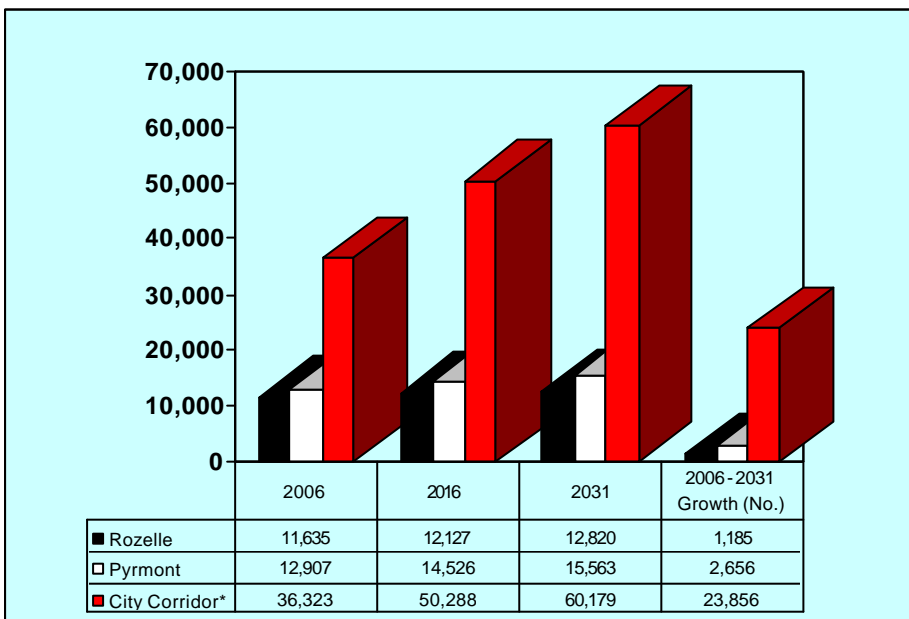
5.4.2 Forecast Population Growth by Station Radii

Based on the TDC’s population forecasts by Travel Zone, it has been possible to estimate the forecast growth in population within the station radii.

Forecast population growth within all of the CBD Metro station radii between 2006 and 2031 is shown in Figure 5.3. The ‘City Corridor’ (Barangaroo - Wynyard, Martin Place, Town Hall and Central radii) shows the strongest growth, with a forecast increase of 23,856 residents or 60% growth in population to 2031.

In light of these forecasts it is likely that there will be a significant increase in demand for accessible and reliable transport within the CBD Metro Station radii in the future as well as pressure on social services, open space provision and public places.

Figure 5.3 TDC Population Projections for Travel Zones within Station Radii



* City Corridor includes Wynyard/Barangaroo, Martin Place, Town Hall & Central
Source: TDC Population Forecasts 2008

5.5 Forecast Employment Growth

5.5.1 Forecast Employment Growth by LGA

The Strategic Plan 2006 - 2009 (prepared by the City of Sydney Council) targets an additional 97,000 jobs for the LGA from 2006 to 2031. This would result in a total of 465,000 jobs in the LGA at that time and a 14% increase in jobs from 2001. Allowing for differences in timeframes and job categorisations, these targets equate to those of the Sydney City, Draft Subregional Strategy¹⁶.

The Inner West Draft Subregional Strategy¹⁷ establishes a modest target of 500 jobs for Leichhardt LGA from 2001-2031 reflecting the LGAs focus towards residential land uses. The target for the City of

¹⁶ Sydney City, Draft Subregional Strategy, Department of Planning (July 2008)

¹⁷ Inner West Draft Subregional Strategy, Department of Planning (July 2008)

Sydney, as established by the Sustainable Sydney 2030 Plan¹⁸, is significantly greater at 97,000 jobs from 2006-2031. If this growth were to be achieved 487,000 jobs would be generated within the LGAs of Leichhardt and Sydney City by 2031.

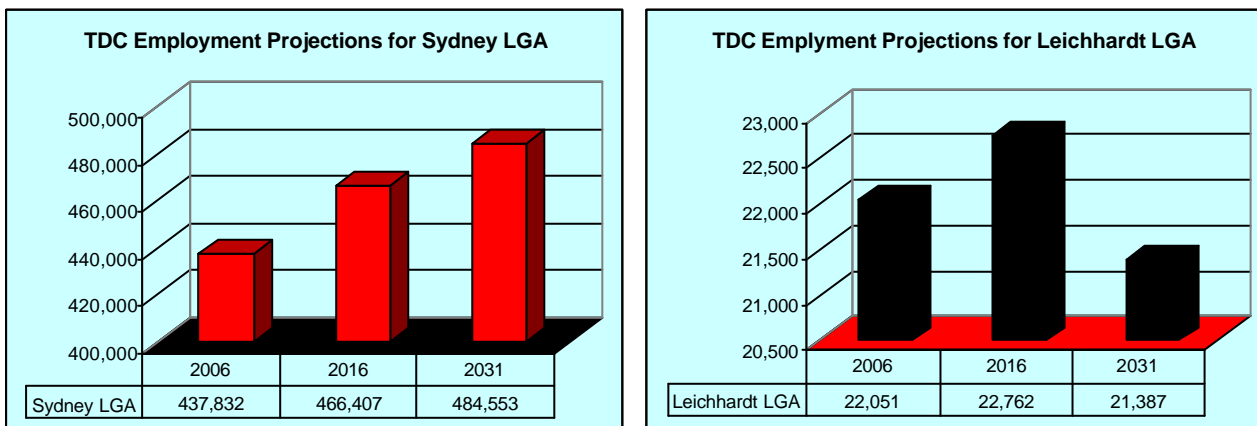
In keeping with the approach taken for the population projections discussed above, the TDC employment forecasts can also be utilised as an alternative forecasting method. The TDC employment forecasts are generated using the TDC’s Small Area Forecasting Model. These estimates are considered particularly relevant to this study as they are designed to be used in the TDC Strategic Travel Model (STM) and other modelling processes undertaken by the Ministry of Transport.

The TDC employment forecasts are based on the ABS Journey to Work data, however the data has been ‘factored up’ to account for census undercount particularly in relation to population, labour force and labour force participation. It is also worth noting that the estimates include major developments known to be occurring at the time of preparation. Accordingly, developments in Miller’s Point, King Street Wharf and Pyrmont have all been factored into the analysis.

Figure 5.4 below shows the forecast growth in employment (jobs) in Leichhardt and Sydney LGAs up to 2031 based on TDC estimates. It can be seen that there is a forecast 3% contraction in the number of jobs generated within Leichhardt LGA between 2006 and 2031. This contraction may be a result of the movement of traditional industries out of Leichhardt LGA to more affordable suburban locations or other port related areas in metropolitan Sydney. The contraction may also relate to the greater efficiencies gained by these industries owing to technology and therefore the decline in the number of on site workers required. These trends are occurring across inner Sydney areas as part of the deindustrialisation and suburbanisation of traditional manufacturing industries.

The minor employment contraction forecast for Leichhardt LGA will be more than accounted for by the significant forecast increase in employment in the City of Sydney LGA over the same period. The TDC forecasts an 11% increase in jobs in the LGA, equivalent to 46,721 jobs.

Figure 5.4 TDC Employment Projections for Leichhardt LGA and Sydney LGA



Source: TDC Population Forecasts 2008

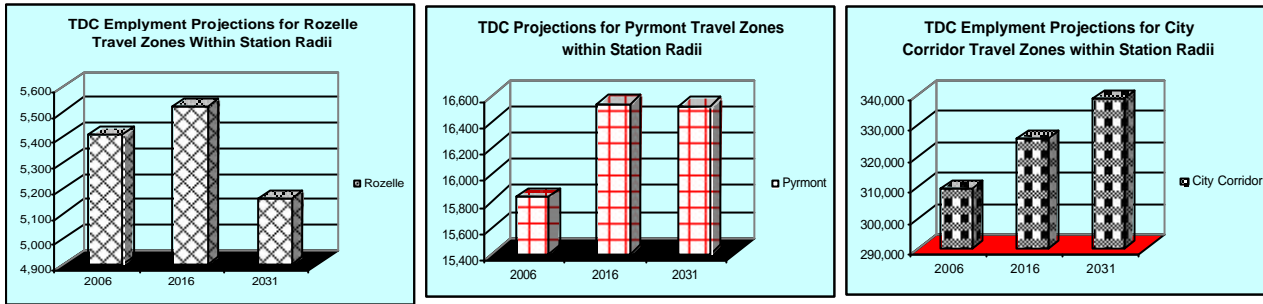
¹⁸ Sustainable Sydney 2030 – City of Sydney Strategic Plan, Final Consultation Draft (2008)



5.5.2 Forecast Employment Growth by Station Radii

Figure 5.5 shows forecast employment (job) growth in station radii based on Travel Zone forecasts. Consistent with the trends experienced by Leichhardt LGA shown in Figure 5.4 above, the number of jobs generated within the Rozelle Station radius have been forecast to contract by 4.5% between 2006 and 2031. This is as compared to the 'City Corridor', where job growth of 9.5% is expected over the same period. The growth forecast for the 'City Corridor' is considered significant and will have important flow on implications on demand for travel to, from and within Sydney CBD.

Figure 5.5 TDC Employment Projections for Travel Zones within Station Radii



* City Corridor includes Wynyard/Barangaroo, Martin Place, Town Hall & Central

Source: TDC Population Forecasts 2008



6 Community and Stakeholder Consultation

An effective and wide ranging community and stakeholder consultation programme is of critical importance to the thorough and balanced preparation of economic and social impact assessments. Through discussions and interviews with a range of social groups, businesses and individuals a greater understanding of potential local impacts, personal interests and perceived concerns can be gained.

The Director-General's Requirement (DGR's) provided guidance in respect to consultation identifying the need for "*an appropriate and justified level of consultation with relevant parties*" including:

- *Various local, State or Commonwealth government authorities; and*
- *The public, including specialist interest groups and affected landowners.*

Accordingly to support the preparation of this study and the integrity of its assessment, a community consultation programme was prepared and implemented.

In order to reach a wide range of affected persons, services and businesses a mixture of consultation methods were used. The methods engaged, the groups, businesses and individuals consulted, as well as key findings have been outlined below. Further details of the consultation programme and a summary of responses by consultation group is provided in Appendix C to H.

6.1 Consultation Methods

The community and stakeholder consultation programme was undertaken between April 4th and May 15th 2009. To ensure that the assessment was thorough and transparent, a broad range of consultation methods were applied. These methods sought to engage people living, working or visiting the areas potentially affected by the project.

Consultation methods included:

1. Street interviews;
2. Telephone surveys;
3. Internet surveys;
4. Social workshops;
5. Business workshops;
6. One on one interviews; and
7. Industry briefings and presentations.

Further explanation of these methods has been provided in this section.



6.1.1 Interviews and Surveys

A variety of interview techniques and survey methods were applied including:

- The preparation and completion of 134 'face to face' street surveys of people within the station radii. The survey team interviewed people located within the radii at Central, Haymarket, Town Hall, Martin Place, Wynyard, Circular Quay, King Street Wharf, Darling Harbour, Pyrmont, Rozelle and Balmain on weekdays as well as on a Saturday;
- The distribution of surveys to members of local groups and organisations to be completed online;
- The preparation of a phone survey and the completion of 133 surveys of residents and businesses located within the suburbs of Sydney, Lilyfield, Balmain, Pyrmont, Ultimo, Chippendale and Haymarket; and
- The preparation of a business survey that was:
 - hand delivered to over 80 street level businesses within Sydney CBD;
 - hand delivered to over 40 street level businesses and commercial organisations within Rozelle and Balmain (along Darling Street and Victoria Road) in addition to Pyrmont;
 - sent electronically for distribution to all of the members of the Haymarket Chamber of Commerce;
 - sent electronically for distribution to all of the members of the Balmain and Rozelle Chamber of Commerce;
 - sent electronically for distribution to all of the members of the City Partnership;
 - sent electronically for distribution to all of the members of the Rocks Chamber of Commerce;
 - sent electronically for distribution to all of the members of the Pyrmont and Ultimo Chamber of Commerce; and
 - included in the Property Council of Australia's newsletter that was distributed to over 1,300 businesses.

6.1.2 Workshops

Three 'social' workshops and three business workshops were conducted to inform the study. Over 36 community organisations and local interest groups were invited to attend the social workshops. Representatives of the 11 Chambers of Commerce based within the Study Area were invited to a choice of two workshops whilst a third business workshop was organised and held in conjunction with the Property Council of Australia.

The workshops were held over six afternoons and evenings in April 2009. The general format of the workshops included an introduction to the project, an explanation of the environmental assessment process, recognition of project timescales, and identification of likely economic, business and social impacts.

The workshops also focussed on the discussion of key issues and queries. The minutes of each workshop was made available to each attendee following the meeting. A condensed version of the workshop minutes can be viewed in Appendix D-E.



6.1.3 One on One Meetings and Interviews

Various meetings were also arranged in order to interview key stakeholders including:

- A meeting with representatives from the City of Sydney Council;
- A meeting with representatives from Leichhardt Council; and
- Telephone discussions with the Department of Housing.

6.1.4 Community Information Sessions and Industry Groups

Various meetings and presentations were also attended in order to learn about the concerns of individuals and key industry groups including:

- The Sydney Metro community public drop in sessions (held on Saturday March 28th and Thursday April 2nd in Balmain and Saturday April 4th 2009 in Darling Harbour);
- The Planning Institute of Australia's (PIA) CBD Metro industry briefing (hosted by PIA on Tuesday April 7th 2009); and
- The Property Council of Australia's (PCA) industry briefing (hosted by the PCA on Friday March 6th 2009).

6.1.5 Number and Type of Stakeholders Involved

Having conducted the community and business stakeholder consultation programme, it is estimated that:

- Approximately 2,000 businesses were given the opportunity to comment on the impacts of the project;
- Over 260 residents, visitors and employees located within the station radii, suburbs and LGAs affected were interviewed;
- Meetings were held with the 11 Chambers of Commerce, representing hundreds of businesses based in the suburbs and LGAs along the CBD Metro route;
- Over 36 community organisations were invited to attend and participate in workshops; and
- The views of numerous property related professional organisations were identified through industry briefing and feedback sessions (including the NSW Division of PIA and the PCA).

6.2 Matters Raised During Consultation

The consultation process raised a number of key issues and questions regarding the project. The following section provides a summary of the key issues raised during the consultation surveys (i.e. those conducted face to face, via telephone or online) and the consultation workshops.

A more detailed breakdown of the survey results, responses and workshop minutes has been provided in Appendix D to H. The key economic and social matters raised during consultation have also been highlighted and discussed in context under the relevant headings in Chapters 7, 8 and 9.



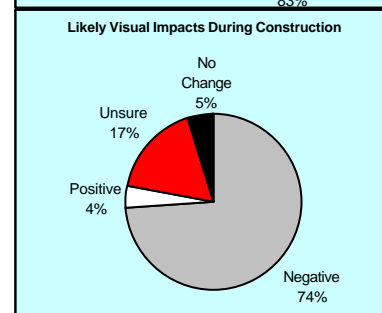
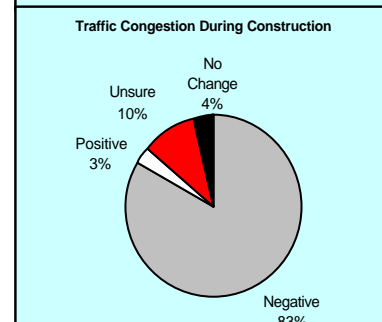
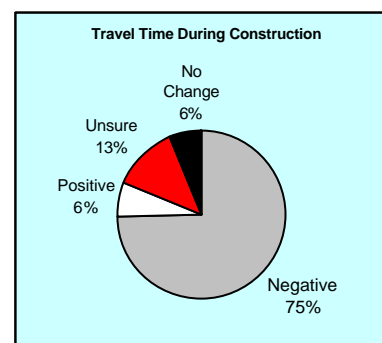
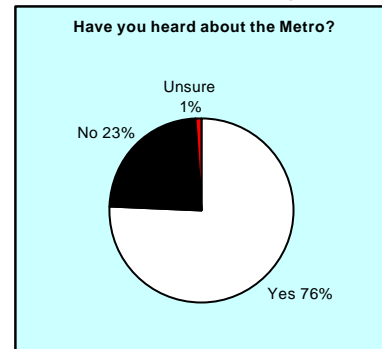
6.2.1 General Survey Responses

Summing up the telephone, face to face and online survey results it was found that a weighted average of 76% of respondents had heard of the CBD Metro project. Of the different survey types, local businesses had the highest rate of respondents who had heard of the project (92%) followed by the telephone survey respondents (81%) and face to face survey respondents (70%).

Social Impacts During Construction

267 people responded to the telephone and business surveys. With respect to the likely social impacts of the project during construction, the majority of responses were cited as either 'worse' or 'significantly worse'¹⁹. It was found that:

- **Travel Time and Accessibility:** 75% of respondents believed that there would be a negative impact to travel time and accessibility. By destination, this was viewed as worse or significantly worse access to work (76%); home (78%) and other destinations (78%).
- **Construction:** 74% of respondents believed that the project would result in increased construction related disturbances (i.e. traffic, noise and dust).
- **Traffic Congestion:** 83% of respondents believed that the project would result in increased traffic generation and road congestion.
- **Crime and Safety:** 41% of respondents believed that the project would have a negative social impact to the perception of local safety and security during construction.
- **Visual Amenity:** 74% of respondents believed that the project would negatively impact on the visual amenity of the areas affected.
- **Carbon Emissions:** 61% of respondents believed that the project would increase the level of carbon emissions through construction related activities and vehicle movements.
- **Access to Services and Community Facilities:** 57% of respondents believed that the project would reduce access to facilities and community services²⁰.
- **Parking:** 52% of respondents believed that the project would restrict the availability of car parking in affected areas.
- **Travel Costs:** 43% of respondents believed that the project would result in an increased cost of travel cost during construction (i.e. because of increased traffic congestion).



¹⁹ Weighted average of responses given to designated categories within the survey

²⁰ Note the survey work was undertaken prior to amendments to the project regarding property acquisition

- **Employment:** 40% of respondents believed that the project would negatively affect access to employment.

Economic Impacts During Construction

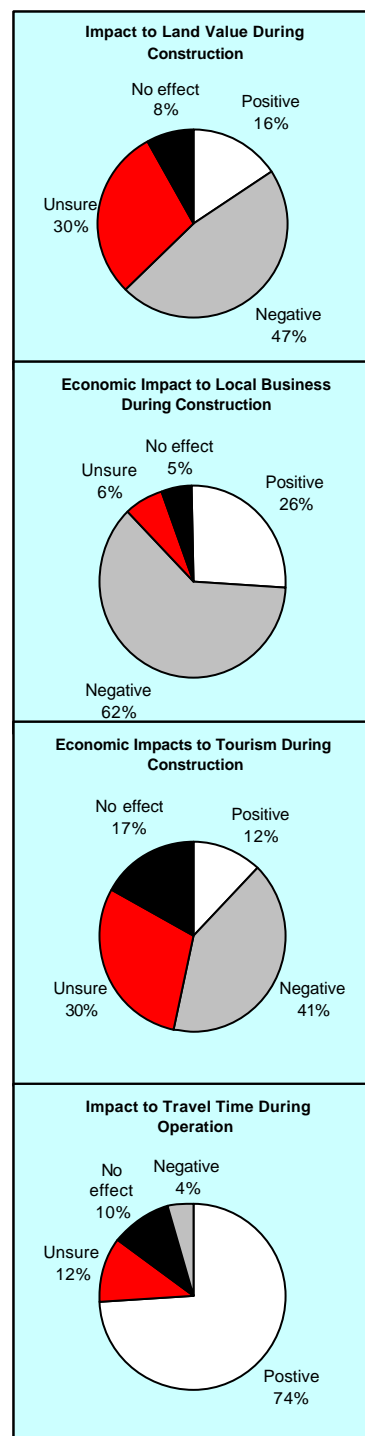
With respect to the likely economic impacts of the project during construction, the survey results found that the majority of impacts by category would be ‘worse’ or ‘significantly worse’. However, a notable proportion of respondents in some categories were uncertain of the nature of the impact. The results are provided below:

- **Land Value:** 47% of respondents believed there would be a negative impact to land values during construction, whilst 30% of respondents were uncertain, and 16% believed the impact would be positive.
- **Employment:** 38% of respondents believed that the projects construction would negatively affect employment, whilst 34% believed it would create employment benefits, and 23% were uncertain.
- **Local Business:** 62% of respondents believed the viability of local businesses would be negatively affected during construction, whilst 26% believed the impact would be positive.
- **Tourism:** 41% of respondents believed the project would negatively affect tourism in the Study Area, whilst 30% were uncertain.
- **Crime and Safety:** 46% of respondents were uncertain of the likely impact to crime and safety in station locations during construction, whilst 37% believed the impact would be negative.
- **Travel Time and Accessibility:** 63% believed the economic impact as a result of increased travel time during construction would be negative.

Social Impacts During Operation

The likely social impacts upon operation were viewed as either ‘better’ or ‘significantly better’ by most of the telephone and face to face survey respondents. However, many respondents were still uncertain of the likely impacts upon operation. A summary of the responses has been provided below:

- **Travel Time and Accessibility:** 60% of respondents thought that the operation of the CBD Metro would enhance or significantly enhance their accessibility to a variety of locations including work and home.
- **Travel Costs:** 48% of respondents thought that the CBD Metro would improve the cost of travel; however 38% were unsure of its likely impact to travel costs.
- **Environmental Benefits:** 59% of respondents believed that the CBD Metro would have a positive environmental impact upon operation, whilst 29% of respondents were unsure of the likely environmental implications.

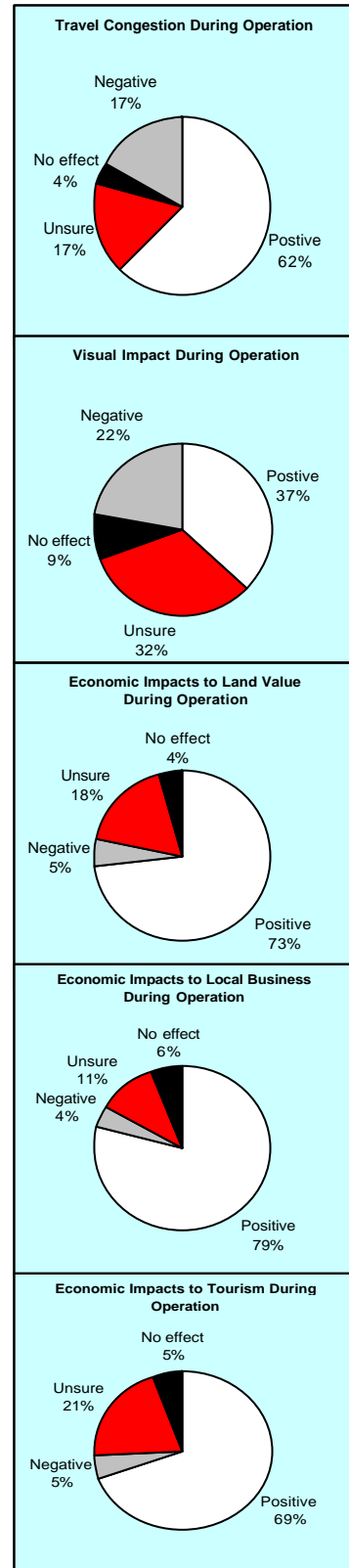


- **Traffic Congestion:** 62% of respondents believed that traffic congestion would reduce or significantly reduce as a result of the CBD Metro.
- **Crime and Safety:** 46% of respondents were unsure of the projects likely impacts to safety and security upon operation, whilst 30% of respondents believed that it would improve.
- **Visual Amenity:** 37% of respondents believed the CBD Metro would have a positive visual impact, whilst 32% of respondents were unsure of this impact.
- **Car Parking:** 36% of respondents believed that the CBD Metro would have an negative impact on car parking, whilst 31% believed it would have a beneficial impact, and 30% were uncertain.
- **General Disturbances:** 45% of respondents believed that the CBD Metro would increase general disturbances (i.e. noise and vibration), whilst 29% were uncertain, and 23% believed the project would reduce the level of local disturbance.

Economic Impacts During Operation

Comparative to the likely economic impacts of the project during construction, the majority of responses believed that the impact would be positive upon operation. Notwithstanding this however, a notable proportion of respondents were still uncertain of the likely nature of the economic impact upon the operation of the CBD Metro. It was found that:

- **Land Value:** 73% of respondents believed that the project would have a positive influence on land values.
- **Global Sydney:** 80% of respondents believed that the project would have a positive influence upon Sydney’s role as a Global City.
- **Travel Time and Accessibility:** 79% of respondents believed that the project would have a positive impact to travel times.
- **Employment:** 69% of respondents believed the project would have a positive impact by increasing access to employment opportunities.
- **Local Business:** 80% of respondents believed the project would have a favourable impact to local businesses upon operation and trade.
- **Tourism:** 56% of respondents believed that the project would benefit tourism, 30% of respondents were however uncertain of the likely impact in this respect.
- **Crime and Safety:** 52% of respondents were uncertain of the impact of the project to local crime and safety. 19% believed it would have a positive influence.



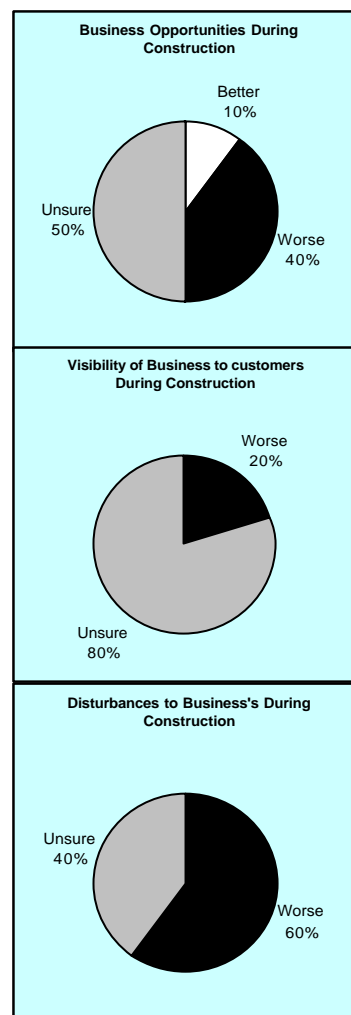
6.2.2 Business Survey Responses

A modest number of responses were received for the business survey and accordingly care should be taken when reviewing the significance of the results. Notwithstanding this, the results provide an indication of business sentiment.

Business Impacts During Construction

58% of business survey respondents believed that their business would be affected during the construction process. The results of the survey are provided below:

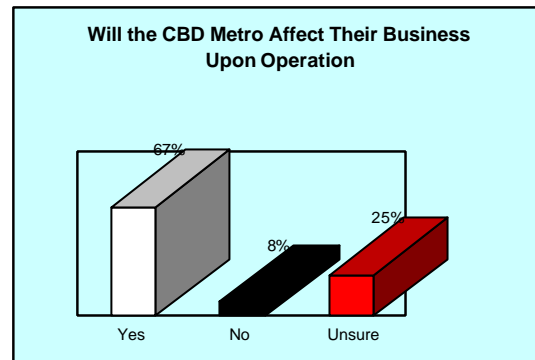
- **Traffic Congestion:** 70% of respondents believed that traffic congestion would be worse during construction, whilst 30% were unsure.
- **Number of Customers:** 60% of respondents felt that construction would have a negative effect on customer numbers, 30% were unsure, and 10% thought the number of customers would increase.
- **Disturbances (i.e. noise, vibration):** 60% of respondents stated that disturbances to their business operations (such as noise and vibration due to construction) would become worse, whilst 40% were unsure of the impact.
- **Staff Travel Time:** 50% of respondents believed staff travel time would increase during construction, whilst the remainder were unsure.
- **Customer Access:** 50% of respondents believed that customer access to their business during construction would worsen, whilst the remainder were unsure.
- **Parking Availability:** 50% of respondents stated that the availability of car parking during construction would become worse, whilst the remainder were unsure.
- **Business Opportunities:** 50% of respondents were unsure how construction would impact on business opportunities, whilst 40% felt they would be negatively impacted, and 10% felt there would be increased business opportunities.
- **Staff Recruitment & Retention:** 50% of respondents were unsure how staff recruitment and retention would be affected during construction, 40% believed that it would become worse, and 10% said it would improve.
- **Visibility of Business to Customers:** 80% of respondents were unsure about the affect of the project to the visibility of their business to customers during construction, while 20% felt that it would become worse.
- **Land Value:** 80% of respondents were unsure of the impacts on property and land values during construction, whilst 20% felt they would become worse.



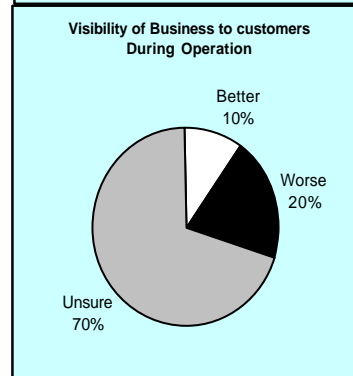
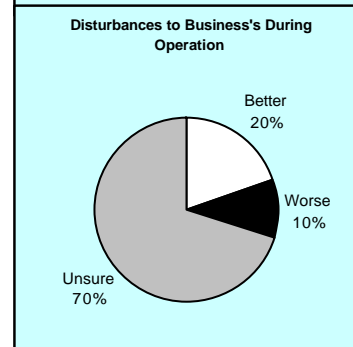
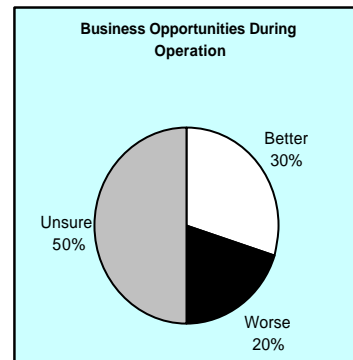
Business Impacts During Operation

Respondents were initially asked whether they felt their businesses would be impacted by the CBD Metro upon operation. 67% of respondents felt their business would be affected, 25% were unsure, whilst 8% believed that the CBD Metro would not affect their business upon operation.

Respondents were then asked about the types of impacts they expected on their business once the CBD Metro was in operation. The results are summarised below:



- **Turnover:** 55% of respondents were unsure how their turnover would be affected by the operation of the CBD Metro. 36% felt turnover would become worse and 9% thought it would improve.
- **Staff Travel Time:** 45% of respondents were unsure of the affect the CBD Metro would have on staff travel time, however 36% believed it would improve, whilst 18% stated it would become worse.
- **Customer Access:** 64% of respondents were unsure how customer access would be affected. 27% stated that it would be worse, whilst 9% felt it would improve.
- **Number of Customers:** 70% of respondents were unsure how the CBD Metro would affect their customer numbers, whilst 20% stated their customer numbers would fall, and 10% felt that they would improve.
- **Traffic Congestion:** 45% of respondents were unsure about traffic congestion upon operation of the CBD Metro. 27% felt that traffic congestion would be reduced and 27% believed that it would worsen.
- **Parking Availability:** 55% of respondents were unsure of the affect on car parking availability upon operation of the CBD Metro, whilst 36% stated that parking would worsen and 9% believed it would improve.
- **Business Opportunities:** 50% of respondents were unsure of how the CBD Metro would impact business opportunities. 30% believed business opportunities would improve, whilst 20% felt it would worsen.
- **Staff Recruitment & Retention:** 50% of respondents were unsure how staff recruitment and retention would be affected. 30% felt staff recruitment and retention would improve, whilst 20% thought they would worsen.
- **Disturbances (i.e. noise, vibration):** 70% of respondents were unsure of the affects the CBD Metro would have on local disturbances. 20% felt that disturbances would lessen, whilst 10% stated the disturbances would worsen.



- **Visibility of Business to Customers:** 70% of respondents were unsure how the CBD Metro would impact the visibility of their businesses to customers. 20% thought it would become worse, whilst 10% felt visibility would improve.
- **Land Value:** 70% of respondents were unsure how land values would be affected by the CBD Metro upon operation. 20% felt they would improve, whilst 10% thought that land values would worsen.

6.2.3 Workshop Responses

The majority of social and business workshop attendees welcomed the principal of the CBD Metro and agreed that upon operation the CBD Metro would have positive benefits to local businesses and communities. These benefits related to enhanced travel times, reliability and additional customers being able to access businesses within inner city areas.

A summary of other responses is provided below:

- The CBD Metro was given support, as long as the project was the starting point for a broader metro network that extended to the north-west, west and northern beaches. If the CBD Metro was not extended further than Central and Rozelle Stations, then a notable proportion of attendees questioned the value for money of a CBD Metro network.
- Many attendees questioned whether the CBD Metro project would eventuate in any case, let alone lead to extensions to other parts of the Sydney Region.
- A major concern was the lack of publicly available project information, including uncertainty (at the time of consultation) as to the route layout, station locations, properties to be affected, and lack of impact management plans. These concerns were exacerbated by the perceived speed of the project and the lack of explanation for choosing some sites for construction or station locations over others.
- Noise, traffic generation and vibration were all key construction impacts highlighted by participants. Participants were also concerned pedestrian and cycle access was not going to be maintained in locations such as Union Square and Darling Street, Rozelle during construction.
- Representatives of the Chambers of Commerce were keen to learn more about the possible business opportunities resulting from the redevelopment of stations and other construction sites, whilst some groups were concerned about the potential competition that could be created as a result of new businesses (particularly larger retail franchises) locating in, or above station locations.
- Local community groups were concerned about the potential height of buildings on station sites. This was seen as a particular issue for Rozelle, where the prospect of a tall building or building of little architectural merit on the station site was considered contrary to the local vision to maintain the heritage and high street character of the area.
- The location of proposed construction sites in Rozelle and Pyrmont were raised as a major social concern. Construction of these sites was thought to result in negative social impacts on existing land uses and the availability of public open space for local events.
- The location of station entrance and exit points was also a matter of considerable debate, together with pedestrian access to and between stations. How these factors will integrate positively with the existing built environment, particularly in terms of design and layout, were key issues.
- Businesses were concerned with the impact concurrent construction sites (and therefore disturbance) would have on local amenity and the operation of businesses within the station radii. Business representatives indicated that some businesses would not survive the construction period.



owing to its potential influence on the level of passing trade or local amenity. Accordingly, many queried if government compensation for disturbance would be provided.

In summary, the main concerns from consultation workshops related to impacts during construction and justification for chosen station sites. Additional information was sought by attendees to better understand why particular decisions had been made and how any potential impacts would be mitigated. There was a general consensus however, that upon operation, and as part of a broader network, the CBD Metro would have a beneficial economic and social impact to the local areas affected and to the wider Sydney Region.

6.3 How Consultation Matters Have Been Addressed

Each matter identified and discussed during the consultation workshops was minuted, whilst the results of the surveys and interviews have been collated and analysed. A summary of the interview and workshop results have been provided in Appendices D to H. In turn every relevant economic and social issue identified has been listed and where appropriate discussed in greater detail in Chapters 7, 8 and 9 of this study.

Chapters 11 – 14 of this working paper have subsequently assessed the level of significance of impacts identified during consultation, including when the impact is likely to occur and identified means of mitigating, avoiding or minimising the impacts where required. Where positive, the impacts have been identified along with mechanisms to enhance the benefits.



7 Likely Macroeconomic Issues and Impacts

7.1 About this Chapter

The Director General of the Department of Planning identified the requirement to assess the likely economic impacts of the project. The following Chapter reviews and assesses the wider or 'macro' economic impacts of the project during both the construction and operational phases. Accordingly with respect to economic impact, the following Chapter discusses:

1. The economic merits of agglomeration;
2. The economic costs of traffic congestion;
3. The economic benefits of public infrastructure investment;
4. Economic multipliers;
5. Potential influences to land value;
6. Likely impacts to tourism; and
7. Employment generation.

Chapter 8 also assesses the likely economic impacts of the project however there is a greater focus on the impacts to individual businesses and services at a more detailed or microeconomic scale (i.e. within the suburbs, LGAs, station radii and safeguarded corridors of the project.)

7.2 Economic Merits of Agglomeration

Agglomeration relates to the concentration of related or similar activities within a common geographic area such as a city centre. Sydney CBD has grown to support the agglomeration of economic activity through an increase in the density of the built environment and the associated clustering of industries. Improvements to the existing Sydney CBD transport network would enhance workforce accessibility thereby allowing for greater building densities and agglomeration.

As discussed in Chapter 5, Sydney CBD has developed a strong cluster of businesses in the finance, telecommunications, scientific, technical, legal, retail and property industries. These industries seek to co-locate within Sydney CBD despite its comparatively higher cost of space because of the productivity benefits of agglomeration.

Empirical research in the UK and Europe²¹ has tested and ratified the positive relationship between agglomeration and economic benefits to businesses. Controlling for other factors, these studies have found that business productivity increases in line with city density.

²¹ Rosenthal, S and Strange, W (2004) 'Evidence of the Nature of the Sources of Agglomeration Economies' Handbook of Urban and Regional Economic



The economic benefits of agglomeration may be a result of:

- Improved opportunities to network;
- Increased innovation and service sophistication;
- Cost savings through economies of scale;
- The ability to specialise and use other services to complement business activity; and
- A larger available customer and supplier market.

The consumer also benefits from the economic effect of agglomeration through better access to choices and lower prices as a result of price competition. The NSW State Government recognises the economic importance of agglomeration and the need to cluster businesses in strategic centres²². The success of strategic centres (such as Sydney CBD) and their ability to support the agglomeration of industries relies however on their ability to increase densities and thereby the integration of land use with workforce transport.

The CBD Metro will therefore play an important role (as part of the wider public transport system in inner Sydney) in supporting an increase in CBD density and the effective movement of people to and from locations of business. This will in turn enhance Sydney CBD's capacity to support the agglomeration of businesses, the associated economic benefits to private business and consumers in addition to Sydney's role as a global city.

7.3 The Economic Cost of Congestion

As existing public transport in the City of Sydney LGA and inner city areas becomes increasingly constrained (particularly during peak periods) travel by private car potentially becomes more attractive, despite mounting road congestion.

The effect of increased road congestion would be negative to business operations and therefore viability as a result of:

- Increased travel times and therefore business service times, transportation costs and vehicle operating costs;
- Impeded staff access and therefore access to workforce and work related skills; and
- The reduced attraction of Sydney as a place to base a business and invest.

The factors listed above would influence the decision of global organisations to base their headquarters within Sydney. Congestion also has a personal cost through time delays, vehicle operating costs and stress.

To quantify the economic cost of congestion, a study was commissioned by the Council of Australian Governments (COAG) and undertaken by the Bureau of Transport and Regional Economics (BTRE)²³. The study sought to estimate the average costs incurred as a result of congestion to trip travel times and how they would vary over time. The study also assessed costs relating to air quality, travel time variability, vehicle engine operation and efficiency.

²² Action B3 Cluster Businesses and Knowledge-Based Activities in Strategic Centres, Metropolitan Strategy: City of Cities, A plan for Sydney's Future, Department of Planning (2005).

²³ Department of Urban Transport and Regional Services, Bureau of Transport and Regional Economics: Estimating Urban Traffic and Congestion Cost Trends for Australian Cities, Working Paper No.71



The study found that the ‘avoidable’ cost of congestion to Australian Capital Cities (as of 2005), was in the order of \$9.4 billion. This figure could be broken down into:

- \$3.5 billion in private time costs (trip delay plus variability);
- \$3.6 billion in business time costs (trip delay plus variability);
- \$1.2 billion in extra vehicle operating costs; and
- \$1.1 billion in extra air pollution damage costs.

*“If it means less cars on the road then ultimately it will be beneficial to the environment”
(Pymont resident)*

By city, Sydney had the highest estimated avoidable cost of congestion of \$3.5 billion followed by Melbourne at \$3.0 billion.

Forecasting the growth in cost, the BTRE estimated that the avoidable social cost of congestion would more than double over the 15-year period between 2005 and 2020 to \$20.4 billion. Over \$9 billion of this cost related to business vehicle use. For Sydney alone, the cost of avoidable congestion was forecast to increase to \$7.8 billion by 2020.

The BTRE study also identified additional flow on costs of congestion that were not assessed as part of the study. Relevant to this study were the likely costs incurred by businesses having to re-locate or close due to restrictions to their operations as a result of congestion. A cost of congestion to business includes reduced business productivity.

Additional social costs that were identified, but not quantified by the BTRE study, related to increasing housing costs (people seeking to live in closer proximity to city centres) as well as widespread stress and irritation from having to cope with heavy traffic levels.

Improvements to Sydney’s existing public transport system (including the CBD Metro) will support a reduction in road congestion by encouraging a modal shift away from private car usage. This change will also assist in reducing the potential economic cost of congestion to business operations as well as the socioeconomic cost to factors such as mental and physical health and well being. The socioeconomic costs of congestion are further discussed in Chapter 9.

7.4 Economic Benefits of Public Infrastructure Investment

Research undertaken by Otto and Voss²⁴ quantified the relationship between public infrastructure provision and private production. The research stemmed from economic theory that public investment in infrastructure projects, such as electricity grids, water supply and transportation systems (i.e. metro rail) could have a positive flow on effect to private production and economies. Some forms of public infrastructure (such as education and health care) can have additional external or social benefits, that is, benefits to society beyond those accrued to the individuals or firms immediately involved.

Otto and Voss’ research stemmed from debate in the US that the reduction in government infrastructure spending and investment had been in-part responsible for the observed slow down in productivity growth. The potential correlation between these factors was applied to an Australian context, to determine whether a similar decline in public infrastructure investment was sacrificing future economic growth in Australia.

Whilst the research by Otto and Voss advocated further detailed research and testing, it found that positive economic effects and enhanced production could be gained by private enterprises as a result

²⁴ Otto, G and Voss, G (1995) Public Infrastructure and Private Production



of public infrastructure. Furthermore these supply side effects could be accrued when the economy was strong or close to full employment capacity.

Quantifying this, Otto and Voss found that with everything else constant, a 1% increase in public capital stock could lead to a 0.4% increase in private output. In fact the Otto and Voss research results implied that *“the marginal returns to additional investment in public infrastructure capital are very high, and significantly higher than the returns to additional investment in private capital”*.

These findings are significant and are presented by many economists as justification for capital expenditure on infrastructure projects.

7.5 Economic Multipliers

The construction of infrastructure projects can have a positive economic benefit to industries as a result of the multiplier effect. Multipliers refer to the level of additional economic activity generated by a source industry. The construction industry is a key source industry responsible for 6.6% of Australia’s Gross Domestic Product (GDP). Accordingly, the construction of major infrastructure projects (such as the CBD Metro) can have strong positive economic impacts to other industries through the multiplier effect.

There are two types of multipliers:

1. *Production induced*: which is made up of:
 - a first round effect: which is all outputs and employment required to produce the inputs for construction; and
 - an industrial support effect: which is the induced extra output and employment from all industries to support the production of the first round effect.
1. *Consumption induced*: which relates to the demand for additional goods and services due to increased spending by the wage and salary earners across all industries arising from employment

The source of the multipliers adopted in this study is the ABS and Australian National Accounts: Input-Output Tables 1996-97 (ABS Catalogue 5209.0). These multipliers are based on both the building and non building industry and therefore the effects are an approximation only.

Table 7.1 below shows the estimated first round effects, industrial support effects, and consumption induced multiplier effects at rates of \$0.466, \$0.438 and \$0.962 respectively to every dollar of construction.

Table 7.1 Construction Multiplier Effect

	Initial Effects	Production Induced Effects		Consumption Induced Effects	Total
		First Round Effects	Industrial Support Effects		
Output multipliers	1	0.466	0.438	0.962	2.866
Output (\$million)	4,300	2,004	1,883	4,137	12,324

Data Sources: Australian National Accounts: Input-Output Tables 1996-97 (5209.0), Price Index of the Output of the Building Industry-Producer Price Indexes (6427.0), CPI All Groups - RBA Bulletin (Table G2)



The results show that the estimated CBD Metro construction cost of \$4.3 billion (ex. GST) could generate a further \$3.88 billion of activity in production induced effects and \$4.14 billion in consumption induced effects.

Total economic activity potentially generated by the construction of the CBD Metro would therefore be approximately \$12.3 billion.

It is important to note however when reviewing these estimates that multiplier effects have a national impact and not necessarily a local impact. The ABS notes that *“Care is needed in interpreting multiplier effects; their theoretical basis produces estimates which somewhat overstate the actual impacts in terms of output and employment. Nevertheless, the estimates illustrate the high flow-on effects of construction activity to the rest of the economy. Clearly, through its multipliers, construction activity has a high impact on the economy.”*

7.6 Impacts on Land Values and Rents

An important economic implication of the project relates to land value. Land values have a tendency to move in response to all positive and negative influences in a given area. As such they can be seen as a barometer of the net effectiveness of various changes.

With respect to the impact of rail infrastructure to land value, Vladimir Bajic found that when the metro was introduced in Toronto, Canada *“the direct savings in commuting costs have been capitalized into housing values”*²⁵. This research suggests that land values are likely to increase in response to transport infrastructure improvements in inner city areas such as Chippendale, Pymont and Rozelle as people are willing to pay more to live in accessible locations. The intensity of the effect will be related to the net transport benefit resulting from the new system.²⁶

Tse et al also found a general improvement in land values in close proximity to rail stations in Hong Kong²⁷ and also cited an extensive list of studies linking rail and other infrastructure to land values.

7.6.1 How Far will the Impacts Extend?

The impact of the project on land values will most probably extend as far as a person is likely to travel by foot to reach a CBD Metro station. It will diminish with distance and be capped by the maximum walking time a person could be expected to walk before selecting some other form of transport.²⁸

Some studies²⁹ have observed measurable effects up to 1.5 kilometres from infrastructure, however 10 minutes walking time is the more likely limit. Experience suggests that the effect on land values will begin as soon as the community is reasonably confident that the project will proceed. However, the effects will not be fully realised until sometime after the project is completed and the community has time to appreciate the extent of benefits.

²⁵ Bajic, V. (1983). "The Effects of a New Subway Line on Housing Prices in Metropolitan Toronto." *Urban Studies* 20(147-158).

²⁶ Carroll, T. M., T. M. Claretie, et al. (1996). "Living next to Godliness: Residential Property Values and Churches." *Journal of Real Estate Finance and Economics*.

²⁷ Tse, R. Y. C., Y. C. Lee, et al. (1997). "Effects of Railway on House Prices in Hong Kong." *Australian Land Economics Review* 3(1): 33-35.

²⁸ Debrezion, G., Pels, E. & Rietveld, P. 2007, 'The Impact of Railway Stations on Residential and Commercial Property Value: A Meta-Analysis' *Journal of Real Estate Finance and Economics*, vol. 35, no. 2, pg 161-180.

²⁹ McMillen, D.P. & McDonald, J. 2004, 'Reaction of House Prices to a New Rapid Transit Line: Chicago's Midway Line 1983 – 1999' *Real Estate Economics*, vol. 32, no. 3, pg 463 – 487



This means that improvements in land value are likely to occur from the time of the announcement of the CBD Metro. However, it can be anticipated that property prices will not completely absorb the effect of the CBD Metro until perhaps 2-3 years after its commissioning.

Some studies relating to other forms of infrastructure have also found that the level of charges for use can negate the positive influence on land values. By way of example, land values in response to some new motorways have had only minor or delayed impacts due to the high perceived cost of use.

However, this study has been based on the assumption that the cost of travelling on the CBD Metro would be comparable to other public transport modes. Accordingly, it is anticipated that the cost of use should not have a significant impact on negating land value increases.

7.6.2 How will Land Values Alter?

Bajic's research finding, that the impact on land values approximately equates to commuting savings, may be applied as a method for estimating the impact of the CBD Metro on residential land values. Rozelle and Pyrmont are currently served by buses so the benefit of the project to land values will most likely be the perceived value of travel time saved by train commuters compared to those using existing bus services. Caution must be applied in using Bajic's method however given that it is an international study without Australian comparables.

Notwithstanding this, the savings enjoyed by households will depend upon their use of the CBD Metro, the relative costs of the competing transport option and the perceived value of the time saved. At this stage of the project it is difficult to accurately quantify these factors and it will not be until operation and completion of the CBD Metro that the true effects on land values can be quantified. However, a high level indicative estimate of this effect has been undertaken and is explained further below.

Currently bus travel time from Rozelle to the City Rail Wynyard Station is around 17 minutes. It is estimated that travel time using the CBD Metro (including entry and exit to, and from, the stations) will be about 5 minutes, resulting in a saving of 12 minutes. Assuming 1 person per household commutes from Rozelle to Wynyard, at a cost of time of \$15 per hour, there is a time saving of 24 minutes or \$6 per household per day. It appears that a similar benefit would exist in the trip from Rozelle to Town Hall.

Translating \$6 per working day into rent per year and capitalising at 5% suggests a potential property value increase of around \$30,000 per dwelling. The precision with which property values capitalise the travel benefit will depend upon resident perception of the benefit which may be subjectively considered differently to the simple time saving as computed here. A specific study of the perceived benefits and utilisation of the CBD Metro by residents will be necessary to provide a more precise estimate of the likely impact to land values. In any case the benefit will diminish with distance from the CBD Metro stations.

Rozelle Station will be designed to facilitate a transfer of passengers from buses travelling to Sydney CBD along Victoria Road. By transferring commuters from buses to the CBD Metro a time saving may be achieved which could also impact on more distant property values. This effect will however depend upon the perception of benefit as appraised by commuters. While it may have real benefits it will be too diffuse to be confidently measured.

If the metro network is extended further into the suburbs, the impacts on more remote localities will be greater due to the relatively enhanced commuting benefits.



7.6.3 Who will benefit?

The economic benefits of changing land values brought about by the CBD Metro will be distributed between residents and landowners. The economic value of commuting benefits will be capitalised into land values in Rozelle and Pyrmont. Therefore the net economic benefit to residents will be experienced as a land value increase and not as a direct commuting benefit. This means that the eventual economic beneficiaries will be those who own the affected properties at the time the benefit is capitalised.

The impact on the Sydney CBD component of the CBD Metro will be more complex to estimate. The CBD is already served by buses and the heavy rail system. The CBD Metro will ease demand for these transport modes rather than produce substantial travel time savings. For this reason the section of the CBD Metro from Central Station to Wynyard-Barangaroo Station may not experience a significant change in land values.

Indirectly, the provision of the CBD Metro will enable Sydney CBD to develop further by delaying the likely prospect of the existing transport systems exceeding capacity. This means that the benefit of the CBD Metro will be considered through its action in allowing the CBD to continue to grow rather than the alternative where its absence could result in Sydney CBD becoming stunted as a result of a limited transport system. The question for the CBD is not so much how land values will increase as a result of the CBD Metro, but rather how they could stall in the future if the CBD Metro, or something very similar, is not provided.

7.7 Tourism

The City of Sydney is the premier tourist destination for Australia³⁰. Globally iconic, Sydney and its attractions (e.g. the Harbour Bridge, Sydney Opera House) attract over half (54%) of all visitors to Australia. Sydney's role as a domestic tourist destination is also significant. In 2008, Sydney accommodated 2.6 million visitors and 5.5 million domestic daytrips³¹.

The considerable number of visitors to Sydney and NSW annually has a positive flow-on effect to the local, state and national economy. Tourism generates over 157,800 direct jobs and a further 109,600 indirect jobs in NSW, with tourism contributing around \$27 billion to the NSW economy per annum³².

In the Sydney Region over 26,800 businesses are tourism based with a further 98,500 related to the tourism industry³³. There is also an important relationship between Sydney's role as global city and the business tourist industry, with business related travellers spending one third of all nights spent in Australia, in Sydney.

The attraction of Sydney as a place to visit for leisure or business, relates however to more than its iconic attractions. The lifestyle attributes of Sydney is an important factor as is the ease of moving around the City. Transport systems such as the CBD Metro can provide clear and user-friendly travel options for visitors.

³⁰ Travel by Australians: December Quarter 2008, Tourism Research Australia

³¹ Travel to Sydney, December 2008 Tourism New South Wales

³² Tourism New South Wales - www.tourism.nsw.gov.au

³³ Regional Tourism Profiles NSW 2007, Tourism Australia www.tra.australia.com



Additional reasons why visitors to a City may prefer rail (including metro) networks as a means of moving around a city include:

- The ability to easily compare a metro system to similar transport infrastructure in other international cities;
- The comparative ease with which tourists can understand the direction of travel or a route network;
- The frequency of service; and
- The price point – cheaper than a taxi yet more readily understood than a bus network.

The benefits of a metro system to both domestic and international tourism also relates to the extended hours of service and the support this can bring to Sydney's night time economy. A stronger night time economy is not only beneficial for economic reasons but also creates activity and excitement in a city centre improving its sense of safety and lifestyle appeal.

7.8 Employment Generation - Construction and Operation

The project will generate employment in two ways – through construction and through operation. This section quantifies and discusses the direct and indirect employment benefits of the project using the following assumptions:

- A base year of 2008 for Sydney Metro start up;
- A 5-year construction period (from April 2010 to the last quarter of 2015); and
- Operation commencing in 2015.

The construction industry is a significant component of the Australian economy accounting for almost 9% of the workforce as of November 2008³⁴. In fact the construction industry generates 775,000 direct jobs per annum in Australia, making construction the third largest source of employment in Australia.

The industry also has strong linkages with other sectors, so its impacts on the economy go further than the direct contribution of construction through its strong multiplier effect.

Sydney Metro has estimated the number of direct and indirect jobs generated as a result of the proposed 5 year construction period. Direct jobs were defined as those relating to the project's development through commissioning, operating and managing the facility. Direct jobs that would be generated include onsite labour, supervision, professional services and project managers.

Indirect jobs were defined as jobs (within Australia) that support the project through the provision of goods and services such as off site manufacturing.

Major infrastructure projects can also have flow on or indirect secondary benefits to job generation through the raw material supply chain and jobs created as a result of the new infrastructure (such as food and beverage services, public facilities and services and related infrastructure projects). Secondary indirect jobs were not however included in the job generation calculations.

In summary, Sydney Metro estimates that based on an 8 year project design and construction period, 9,594 direct (onsite) job years would be created between 2008-2016 equivalent to 1,200 jobs per

³⁴ Australian Bureau of Statistics Catalogue No. 5209.0.55.001 Australian National Accounts: Input-Output Tables - Electronic Publication 2004-05



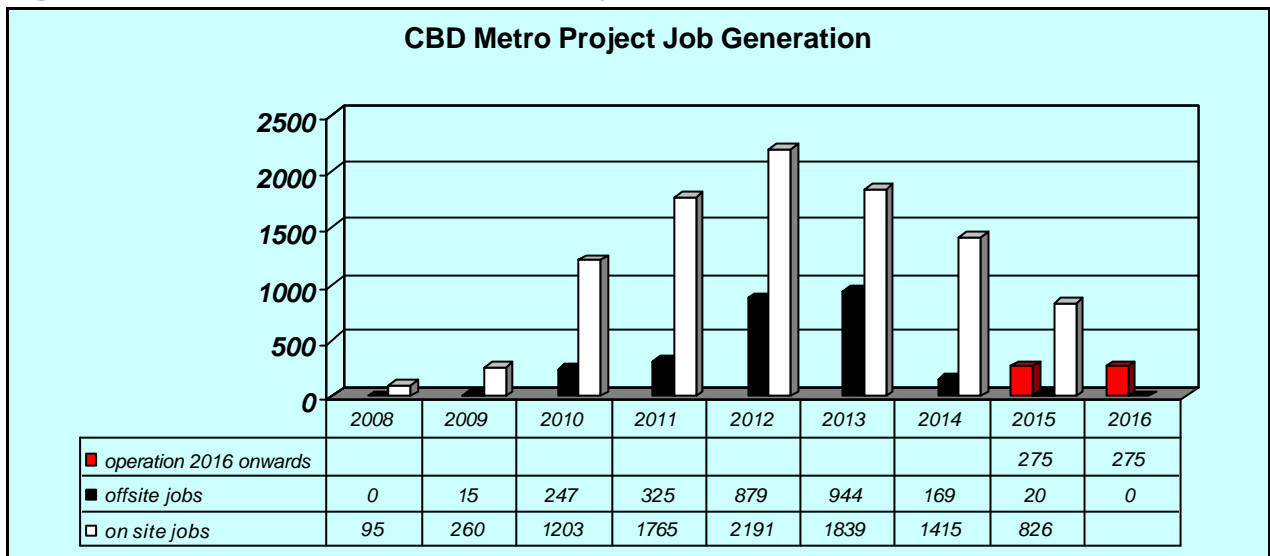
annum. Furthermore, approximately 2,599 indirect (off site) job years would be generated, equivalent to 324 jobs per annum based on a similar project period.

Sydney Metro estimates 12,467 job years (or 1,557 jobs per annum) would be generated by the project³⁵. The peak number of jobs (3,070) would occur in 2012.

Based on the design and operating characteristics of the project, approximately 275 jobs would be created per annum to support the CBD Metro's operation and maintenance. Over a 30 year period this would result in 8,250 job years.

A summary of the estimated number of jobs to be generated by the project are provided in Figure 7.1 below.

Figure 7.1 CBD Metro Direct, In direct and Operational Job Generation



Source: Sydney Metro Estimates

³⁵ Based on Sydney Metro Estimates



8 Likely Microeconomic Issues and Impacts

8.1 About this Chapter

The Director General of the Department of Planning requires the assessment of project's likely impact as a result of property acquisition and to business viability. In light of the discussion in the preceding Chapter, matters relating to property acquisition and business viability are location specific and are considered microeconomic impacts of the project.

With respect to property acquisition, the following Chapter discusses:

1. How the property will be acquired and compensated for in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*;
2. Which properties will be affected by property acquisition;
3. How many jobs will be directly displaced as a result of property acquisition;
4. Key microeconomic issues and matters regarding:
 - a. How and what businesses may be affected during the construction phase; and
 - b. How and what businesses may be affected during the operational phase.

Whilst the proposed CBD Metro network will be located predominantly below ground, it will still be necessary to acquire sites to facilitate access to the underground caverns for construction and to build station entrance and exit points.

8.2 How will property be acquired?

There are over 600 properties located within the safeguarded CBD Metro corridor. The properties relate to a mix of private residential, commercial and mixed uses. As part of the consultation process Sydney Metro has written to property owners within the corridor advising them of the project and its preliminary details.

In order to facilitate the construction of the project, over 33 properties have been identified as necessary for acquisition affecting approximately 160 business tenants.

8.2.1 Process for Property Acquisition

The acquisition of properties will be conducted by Sydney Metro either through negotiated purchase or if that fails, compulsory acquisition. Generally it is considered desirable for public acquisition to be handled through negotiation wherever possible and only where negotiation breaks down to resort to compulsory acquisition. As a result Sydney Metro has confirmed that they will make every effort to negotiate a mutually acceptable offer and equitable price with property owners.

Compulsory acquisition is possible in NSW as all property in the State is held through a grant from the Crown and the Crown retains the right to resume land when required for public purpose. The owners of property are protected by the provisions of the *Land Acquisition (Just Terms Compensation) Act 1991*.



The provisions of Section 55 (a) – (f) of the *Land Acquisition (Just Terms Compensation) Act 1991* outline the relevant matters to be considered in determining the amount of compensation payable to the disposed owner. These are summarised as follows:

55 (a): the market value of the land on the date of its acquisition.

55 (b): any special value of the land to the person on the date of acquisition.

55 (c): any loss attributable to severance.

55(d): any loss attributable to disturbance.

55(e): solatium

55 (f): any increase or decrease in the value of any adjoining land owned by the person.

8.2.2 What this means for Property Owners

In accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*, property owners affected by the project will not only be paid fair market value, but other costs and losses such as disturbances to business operation due to relocation. Potential costs and expenses include:

- Legal costs (including conveyancing costs);
- Valuation fees (including the costs of the property owners preferred registered valuer);
- Relocation expenses including stamp duty costs in connection with the purchase of another property of equal value;
- Removal costs;
- Mortgage costs and other payments; and
- Solatium – a prescribed amount of money to compensate for the inconvenience of having to move residence. Note that solatium only relates to residential acquisitions.

In the case that only part of the property is required for acquisition, where appropriate, Sydney Metro will adjust services or public utilities, relocate fences and complete any other property adjustments at its expense.

It is important to note that the impact of value gain resulting from the project is however excluded from the assessment of just terms of compensation (Sec.56). This means that the valuation must be made sensitive to the need to exclude any speculative increase in land values in anticipation of the CBD Metro.

Given that property owners who retain their land stand to gain as a result of the project, it could be argued that property owners whose land is taken for the project stand to miss out on a benefit that they would otherwise enjoy. However, it should be apparent that were the government to compensate property owners for the lost gains due to the project, the community would be paying twice for the infrastructure.

There is considerable literature arguing that the apparent inequity is actually due to the failure of the community to collect the benefit that flows to surrounding land owners as a betterment however the practical difficulties of such a collection have been seldom overcome.



8.2.3 How are Tenants and Businesses Compensated?

The approach discussed above relates to the acquisition of properties and the due compensation for property owners. Our analysis has found however that a number of the properties potentially affected by the project are let to individual business tenants.

In the case that these businesses have a lease that has a period to run after such time that the property is required, Sydney Metro will negotiate to acquire the remaining lease period from the tenant. Furthermore in such circumstances, tenants have the same rights with respect to relocation and disturbance as property owners under the Land Acquisition (Just Terms Compensation) Act 1991.

This means that if a property is acquired from which a business is operated and there is a reasonable term remaining on the lease (or arrangements for the business to occupy the building), the business will be compensated for reasonable disturbance costs if the business is required to relocate.

8.2.4 Land below the Surface

In order to construct the CBD Metro it will also be necessary to acquire stratum below the surface of properties. With the exception of special cases, under the Transport Administration Act 1988, compensation is not payable where stratum is required for the development of underground infrastructure.

8.3 What Properties are required for Acquisition?

The following section reviews the properties identified for acquisition in order to enable the construction and operation of the CBD Metro. The properties have been discussed with reference to the areas in which they are located. The social implications of acquiring properties are discussed in Chapter 9.

Rozelle

To enable the construction of Rozelle Station, the following properties have been identified for acquisition:

- 671, 673, 675, 677, 679 and 681 Darling Street - a row of retail and commercial premises;
- 665, 667 and 669 Darling Street - three retail properties;
- 670 and 672 Darling Street - two retail properties;
- 138 -152 Victoria Road - a business premises;
- 154 – 156 Victoria Road - business premises;
- 168 Victoria Road - business premises;
- 170, 172 and 174 Victoria Road - three residential premises;
- 697 – 699 Darling Street - business premises; and
- 1-7 Waterloo Street - business premises.

To enable the construction works, it will be necessary to acquire part of the following property:



- 665a Darling Street: the section of the property required for acquisition relates to part of the open area to the rear of the Neighbourhood Centre Hall.

Lilyfield

To enable the construction of the stabling yards and maintenance depot it will be necessary to acquire part of the former Rozelle Marshalling Yards between Catherine Street and Victoria Road, South of Lilyfield Road. The site is currently in the ownership of the Rail Corporation NSW.

White Bay

The proposed White Bay construction site is currently in the ownership of Sydney Ports, a State Government Authority. Part of the site will be required for construction works and spoil transport.

Pymont

To enable works within Pymont, two locations have been identified for construction being:

- The corner of Mount Street and Miller Street; and
- The corner of Union and Pymont Streets.

The two sites will be required for use during the entire construction phase in Pymont. In order to use these sites it will be necessary to acquire the following properties:

- 108 Miller Street - a mixed retail and commercial building; and
- 3, 5, 7 and 9 Union Street - a row of two storey properties with ground floor retail.

Two alternatives have been proposed for the Construction of Pymont Station. Both alternatives would require the acquisition of the four properties in Union Street to enable construction. Alternative 1 would require the complete demolition of 3, 5, 7 and 9 Union Street whilst Alternative 2 (the preferred scenario) would only require the partial demolition (the rear component) of buildings located at 3, 5 and 7 Union Street. Alternative 2 would still however entail the complete demolition of 9 Union Street.

Barangaroo-Wynyard

In order to facilitate the construction of the Barangaroo-Wynyard Station, the main construction and spoil handling site has been identified as the southern most section of Barangaroo located off Hickson Road. The site is presently owned by the Barangaroo Delivery Authority (BDA) and occupied by operations such as the cruise passenger terminal managed by Sydney Ports. Subject to an agreement with BDA, it will not be necessary to acquire any land within this area for construction purposes.

To enable construction works it will however be necessary to acquire:

- 11 - 31 York Street (corner of Clarence Street) - a 12 storey commercial office building with ground floor retail
- 30 Clarence Street – an 11 storey commercial office building; and
- 36 - 38 Clarence Street – a 10 storey commercial office building with ground floor retail.

During part of the construction phase, it will also be necessary to utilise sections of Margaret Street and close the Kent Street Pedestrian Tunnel in order to construct the subterranean pedestrian link.



Martin Place

To enable construction works for the Martin Place Station, the following options have been identified for construction sites and acquisition:

- 10 retail stores in the Martin Place Shopping Circle;
- 12 Castlereagh Street (BNP Building) - a 15 storey commercial office building; and
- 9 Elizabeth Street - a 12 storey commercial office building.

Entrance and exit points to this Station will be within Martin Place close to the intersection with Castlereagh Street.

Town Hall Square

To facilitate the construction and operation of the Town Hall Square Station numerous sites at the north-west and south-east junctions of Park and Pitt Streets have been identified for acquisition. The sites include:

- 5 - 7 Park Street - the Coronation Hotel is a 5 storey building purchased by the City of Sydney to be demolished to form part of the proposed Civic Square;
- 295 – 301 Pitt Street - a 6 storey mixed retail and commercial office building purchased by the City of Sydney to form part of the proposed Civic Square;
- 303 - 305 Pitt Street, Pittsway Arcade - an 8 storey commercial office building with ground floor retail;
- 532 – 540 George Street - known as the 'Woolworths Building' the 10 storey building provides ground floor and basement level retail with commercial uses on the upper floors;
- 125 – 129 Bathurst Street - a commercial office building with ground floor retail; and
- 131 -135 Bathurst Street - a three storey building with ground floor retail.

City Rail Central Station

It will not be necessary to acquire properties or land to facilitate the construction of the metro Central Station. This is because part of the area located to the west of the CityRail Central Station will be used as a construction site as well as part of Belmore Park. These areas will be returned to their existing uses upon completion of construction.

8.4 Job Displacement

As a result of the necessary property acquisitions, a number of businesses will require relocation to facilitate the construction of the project. It is conservatively estimated that in the order of 3,350 jobs are presently generated by these businesses. The vast majority of these jobs (an estimated 93.5%) are based within Sydney CBD. However, some jobs are also based in Pyrmont (approximately 3.5%) and Rozelle (2.9%).

Many of the businesses to be relocated are likely to choose to move within the same general vicinity as their existing business. This will be particularly the case for existing Sydney CBD based businesses as the majority are likely to seek to retain their CBD address owing to the benefits of agglomeration, the prestige and the accessibility to other services, businesses and clients. Accordingly these jobs will not be lost, rather redistributed within Sydney CBD.



Some displaced businesses within Rozelle and Pyrmont may choose to relocate to alternative commercial or retail premises. However, as the majority of businesses within these areas are small businesses, some may choose not to relocate and reopen and therefore could be extinguished. This could create a net loss of jobs. Given the modest scale of the businesses however, the corresponding net loss will be moderate.

The displacement and potential net loss of some jobs as a result of the CBD Metro should be balanced against the employment generating merits of the project including:

1. The number of jobs directly generated during construction (a peak of 3,070 in 2012) and operation (275 per annum) of the CBD Metro as discussed in Chapter 7;
2. The significant growth in jobs forecast for Sydney CBD over the next 25 years as discussed in Chapter 5 of this study;
3. The role the CBD Metro will have in supporting the creation of new jobs in Sydney CBD through improved access to major sites such as Barangaroo and White Bay; and
4. The job generating capacity of the station sites upon their redevelopment.

8.5 Key Microeconomic issues and Impacts to Business Viability

The likely impacts of the project to the viability of individual businesses will vary dependant on the stage of the development, the location of the business, the type of business and the severity of the impact.

Consultation undertaken for this study, found that over 70% of interviewed business operators believed they would be affected by the project, however many were unsure how. There was a general belief that the construction impacts would have a negative impact to business operations, whilst the operation of the CBD Metro upon completion would have a positive influence on business viability and opportunities.

Businesses that may directly benefit from the construction of the project are those that service the construction industry including recruitment agencies, development consultants, manufacturers, suppliers and food and beverage retailers. A positive flow on effect (or indirect benefit) may also be gained through the boost the construction industry would give to local employment generation and therefore consumption.

Businesses that may be negatively affected are those that suffer from noise and disturbance during construction. For the most part, the negative impacts for businesses will be confined to the construction period.

The following section discusses in greater detail the potential impacts of the project, both positive and negative to businesses and their economic viability. The assessment has been based on responses received from business surveys and interviews, during workshops and focus groups, and from research undertaken by Hill PDA in relation to comparable projects.

“Traffic congestion and lack of parking severely impact customer numbers. Lower customer numbers will have a negative impact on the businesses success. The work will destabilize the area, by causing business closure along the areas where work will take place. Will possibly make the area less attractive to visit. People in Rozelle feel that this is a village, more work and structure in the area will detract from this village feeling.”

(Business Survey Respondent)



8.5.1 The Construction Phase – Likely Negative Impacts

During the construction phase potential negative business impacts to turnover and thus economic viability were identified as:

- **Noise and Vibration:** resulting from construction sites in close proximity to businesses or underground works. Noise and vibration has the potential to negatively affect employee productivity, interaction with clients, workplace ambience. It can also affect the function of services, especially those dependant on a serene environment such as beauticians or outdoor dining areas.
- **Street Closures:** in order to enable construction, a number of streets have been identified for temporary partial closure. Street closures can directly affect businesses dependant on the impact to passing trade and shop front visibility. Businesses may also be affected by street closures as a result of lost customer parking and servicing access.
- **Parking:** as highlighted above, street closures, construction sites and construction workers may impact the availability of customer car parking and its proximity to business locations. This can influence the consumer's decision to use a service or visit a business.
- **Structural Impacts:** dependant on the structural soundness of a building and the works to be conducted below or adjacent, businesses may incur an impact to the structural integrity of their building. However, these impacts are unlikely and would be avoided through the projects design, construction techniques and monitoring. Where appropriate a pre-construction dilapidation asset survey of buildings (i.e. buildings in close proximity to the construction sites) would be undertaken and where appropriate any reasonable damage resulting from the project would be repaired and / or compensated for.
- **Servicing and Deliveries:** street closures, construction sites and restricted access can all reduce the ability of businesses to service their needs and receive deliveries. This can incur time and vehicle related costs as well as lost revenue.
- **Passing Trade:** as a result of traffic and pedestrian flow changes, the level of trade passing businesses may be reduced to the detriment of sales or customers.
- **Traffic Congestion:** impacts to businesses as a result of traffic congestion may be both direct and indirect. Businesses may be directly affected as a result of a delayed or hindered access to work places or servicing areas owing to congestion. A business may be indirectly affected by increased traffic on major thoroughfares such as Victoria Road as a result of traffic congestions. Therefore, increased travel times and therefore hindered access could result.
- **Vehicle Operating Costs:** owing to potential disruptions to travel and extended travel times, businesses may incur a modest increase in vehicle operating costs. This will be a particular issue for service and delivery based businesses (i.e. couriers or distributors).
- **Visual Amenity:** construction sites and disturbances have the potential to negatively affect the visual and aesthetic amenity of locations within the Study Area such as the Rozelle Centre and Union Square, Pyrmont. A reduction in the quality of these environments and their amenity value could influence the number of visitors to the centres having a moderate economic impact to local businesses dependent on passing trade and tourism such as cafes, bookstores and clothing stores.

"My concern now is parking and traffic flow."

(Business Survey Respondent)

In summary, it is likely that the negative impacts of the project to the viability of businesses during the construction period would result in some closures. Examples of where this has occurred in other locations, as a result of major construction projects include the Rocks (during footpath upgrades), Glebe (during utility and footpath upgrades) and Pitt Street Mall (owing to the redevelopment of major retail sites).



Businesses identified the preference for a shorter yet more intensive construction period as opposed to a longer, drawn out period. Completing works within agreed timeframes was an important factor in allowing businesses to sufficiently plan for, and survive likely impacts.

Many of the identified impacts could be reduced through proactive actions such as construction site controls, way finding, improvements to access, business relocations prior to works commencing, and the sharing of information. Detailed and early consultation with businesses about the project, its construction, anticipated timing and management techniques, will assist in minimising concerns and negative impacts.

8.5.2 The Construction Phase – Positive Impacts

During the construction phase potential positive business impacts were identified as:

- **Passing Trade:** dependant on their location, some businesses may benefit from a net gain in passing trade during construction owing to changes to pedestrian traffic and vehicle access.
- **Trade Increase:** particularly for businesses located in close proximity to construction sites or on route to construction sites that sell goods to construction workers or related industries such as service stations, take-away food shops, and hotels.
- **Demand for Services:** for construction related businesses such as construction recruitment agencies, construction companies and resource suppliers.

8.5.3 The Operational Phase – Negative Impacts

During the CBD Metro's operational phase, potential negative business impacts were identified as:

- **Competition:** from new businesses in station locations such as retailers. This was a concern raised by existing small business owners looking to protect their trade area and customer base.
- **Commercial Rent:** as a result of the likely enhanced attraction of locating a business in close proximity to stations, and the associated growth in competition for such spaces, commercial rents may increase. Should this occur there may be some negative impacts on smaller boutique businesses that are not able to quickly absorb higher rents.
- **Changed Behaviour during Construction:** this impact relates to the effect that a forced change in consumer behaviour (such as travel route or diversion) may have to longer term trends. For example: an alternative pedestrian route provided during construction (that moves passing trade away from a given business) may result in a permanent change in behaviour or travel direction even when no longer enforced. This can negatively affect businesses from which trade was diverted and conversely may benefit others.

8.5.4 The Operational Phase – Positive Impacts

During the operational phase of the project, potential positive business impacts were identified as:

- **Business Opportunities within Stations:** the CBD Metro stations are likely to create a range of spaces for new retail and service related business opportunities. These areas will have a high level of passing trade generated by pedestrians. Businesses that will benefit include take-away food stores, dry cleaners, newsagents, coffee shops, and specialty food stores used by shoppers as they pass to and from their destinations.
- **Development Opportunities around Stations:** the introduction of a CBD Metro will support the increase in the

"I think it would be great for my business".
(Business Survey Respondent)



density of development within the station radii. This will enhance opportunities for redevelopment and therefore the viability of development related businesses including development organisations, architects, property consultants, construction related industries, property services and real estate agents.

- **Enhanced Access for Customers:** numerous businesses that were consulted identified the improved customer access and enhanced passing trade as a benefit of the CBD Metro. Organisations such as The Sydney Observatory and Powerhouse Museum in addition to smaller retailers and businesses focused around stations in Union Square, Haymarket and Rozelle all highlighted the merits of an improved transport system and a CBD Metro station in close proximity to their businesses. The Haymarket Chamber of Commerce in particular identified the benefits that had been experienced by the introduction of the monorail and light rail to businesses within the Haymarket area and therefore welcomed the addition of the CBD Metro.
- **Enhanced Access for Staff:** a CBD Metro would enhance workforce accessibility, creating a larger labour pool, increasing staff choice and broadening the available skill set to businesses in proximity of CBD Metro stations.
- **Travel Times:** the CBD Metro will reduce road congestion, therefore enhancing travel times for businesses to, from and across the Sydney CBD.
- **Vehicle Operating Costs:** as a result of efficient and accessible transport alternatives, existing road congestion may be reduced to the benefit of road based businesses.
- **Wider Customer Catchment:** owing to the speed and frequency of the CBD Metro, workers may be more inclined to travel further across Sydney CBD during their lunch hour or before and after work. This in turn creates a larger trade catchment area for businesses located on the CBD Metro network. For example: workers at Barangaroo-Wynyard can travel to Haymarket or Town Hall Square for lunch, shopping, personal services or other activities without unreasonably extending their lunch hour.

“It will reduce vehicle traffic in all areas. Developments such as residential, retail and commercial become more feasible in the inner west due to improved access”
(Business Survey Respondent)

8.5.5 Minimising Negative Business Impacts, Maximising Positive Impacts

The health and viability of the businesses that contribute to the Study Area are of great importance to the success of the City’s economy and the well being of its population. It consequently follows that negative impacts resulting from the project should be minimised and positive ones enhanced to support and maximise business viability. In order to achieve this, based on the impacts identified above, various measures have been identified. These measures are discussed further in Chapter 14.



9 Likely Social Issues and Impacts

9.1 About this Chapter

The Director General of the Department of Planning requires the assessment of the likely social impacts of the project. A particular focus is required on the effects of the project to service provision, access and amenity. Accordingly with respect to social impact, the following Chapter discusses the projects influence to:

1. Public perception and concern;
2. Access to services;
3. Access and social equity;
4. Housing and property acquisition;
5. Amenity and access to public spaces and places;
6. Access to community and public facilities;
7. Disturbances to social amenity;
8. Visual amenity and integration with spaces;
9. The perception of safety;
10. Access to employment and education;
11. Physical and mental health and well being; and
12. Air quality.

The social impacts under the broad headings given above have been identified and assessed during both the construction and operational stages of the project. Where appropriate, mitigation measures to minimise or ameliorate the impacts have been identified. The recommended mitigation measures are discussed further in Chapter 14.

9.2 Public Perception and Concerns

The consultation programme undertaken during the preparation of this study sought to identify and gain a better understanding of the *perceived* social implications of the project.

The interview component of the consultation programme found that 75% of respondents (from a sample size of close to 270 people) had heard of the project. The perception of the need for the project, the benefits it would have, and the challenges it would create varied noticeably between people interviewed, where they were interviewed and what they had heard about the project.

Whilst many respondents supported the idea of a CBD Metro and a wider metro network across Sydney, support was generally contingent on a number of factors including:

- The reliability, quality and integration of the service with other modes of transport and land uses;



- The use of an integrated ticketing system that could be used across all transport services;
- The creation of attractive and cohesive station and interchange environments with a mix of uses to serve commuter needs and ensure safety and security;
- The use of real time train schedule information; and
- The prioritisation of public transport over other modes of travel to make it a more efficient and attractive travel option.

During the initial consultation phase, a number of project factors were yet to be determined and confirmed. Accordingly, the level of detail or certainty regarding components of the project at that time was limited. This was reflected in feedback regarding the project and consequent concerns relating to:

- Justification for the project in terms of patronage numbers and demand in light of cost;
- The precise locations of the proposed station and construction sites and justification for their choice as opposed to alternative sites;
- The level of noise, vibration and disturbance that could occur during construction and operation;
- The design of stations and the mix of uses above and below ground, and how this would affect the character of local areas, the viability of existing businesses, the safety of areas surrounding stations and pedestrian flow; and
- Certainty that the project would ‘happen’, whether sufficient funding had been secured and whether the realisation of the project was dependant on political decisions.

As the project develops and details such as route layout can be confirmed, a greater level of detail and clarity can be provided to local social groups. The exhibition of the Environmental Assessment and the associated consultation process will go a long way to achieving this.

“I know very little about the project. People need to be better informed”

(Sydney CBD worker)

The dissemination and availability of information should be encouraged in order to ameliorate as many concerns as possible regarding the project and thereby reduce social stress and anxiety.

9.3 Access to Services

9.3.1 During the Construction Phase

The scale of the project and the concurrent construction works occurring across the Study Area have the potential to negatively affect pedestrian and traffic flow, and therefore travel times to places of work and other destinations. The negative impacts may be exacerbated by the cumulative affects created by other major developments occurring at the same time as the project in suburbs such as Haymarket, Rozelle and Pyrmont.

This concern was highlighted by the community consultation responses where 78% of street interview respondents from within station radii, felt that their existing travel times to work, home and other destinations would increase during the construction phase of the project. The proportion of people interviewed by telephone who felt that their travel times would be negatively affected (67%) was still significantly lower than the proportion interviewed in the street. It is likely telephone respondents were less likely to live or work in directly affected areas.



Increased travel times are considered a negative social impact and should be addressed through appropriate mitigation measures. These matters have been addressed by the Traffic and Transport studies prepared as part of the Environmental Assessment. Methods to mitigate the negative social impact to travel times and accessibility during construction are further discussed in Chapter 14.

9.3.2 During the Operation Phase

One of the major direct benefits of the project upon completion will be reduced travel times and improved access to various locations and services across the CBD Metro network. Over 50% of street interview respondents believed that their travel times to both work and home would improve as a result of the CBD Metro. An additional 25% felt their travel times would be significantly better. This figure increased to 62% and 25% respectively when referring to access to 'other destinations'.

The majority of telephone interview respondents felt that access to work, home and education would be improved or significantly improved post construction. The overall proportion of telephone respondents who felt they would benefit from the project was once again lower than the proportion of street interview respondents. It is likely this is a result of the fact that those interviewed on the street will become the core commuters for the CBD Metro.

It is expected that travel times (particularly during peak periods) upon operation of the CBD Metro will improve for residents located within the station radii. A particular improvement was identified for the residents of Pyrmont owing to the lack of an existing direct public transport access to areas such as Wynyard and Martin Place. This is a function of a disconnected bus network and delays created by traffic congestion within Sydney CBD.

Travel times will be somewhat improved for residents of Rozelle and Balmain, particularly for residents travelling across the CBD. These residents will benefit from avoiding the road related congestion currently encountered by buses from Rozelle as they enter Sydney CBD.

Improvements to travel time upon operation of the CBD Metro is considered a positive social impact of the project.

9.4 Access and Social Equity

Public transport plays an important role in removing barriers to employment, education, training and health. Accordingly, it is an important factor in enhancing social cohesion and equity to the benefit of society.

The project will influence social equity with respect to access in a number of key ways including access across Sydney CBD, access to and within the CBD Metro, access between transport networks and access to various social needs and services.

9.4.1 Access across the CBD Metro

Upon operation, the CBD Metro will enhance access and cohesion between various areas in Sydney and Leichhardt LGAs for different social groups. The provision of an accessible, reliable and affordable CBD Metro across the Study Area will cater to the broad range of socio-economic groups that inhabit these locations (as discussed in the demographic profile in Chapter 5 of this assessment).

Improved access across the CBD Metro will also help to combat social isolation for some residents restricted in their movement between areas owing to mobility or financial hindrances. It will also enhance the ability for a range of people to access social needs such as education, quality food



retailers, health services, employment, and community services. These improvements are considered a social benefit and therefore a positive impact of the project upon operation.

Social groups within the Study Area range from high income earning professionals and managers (working in Sydney's financial districts) to recent migrants to Australia, students and key workers. The CBD Metro will serve each of these groups equally providing rapid and reliable travel, in and out of peak periods, to a range of employment, retail and cultural destinations.

9.4.2 Equitable Access to and within Stations

The project will also enhance social equity by improving disabled access, access for the elderly, and access for parents with young children. The CBD Metro rolling stock and stations will be designed so that they are wheel chair accessible and able to accommodate the needs of mobility and sensory impaired persons.

It will also be important to ensure that stations, as well as access points leading to the stations, are designed with appropriate gradients for access, paving, and kerb heights, as well as tactile tiling and signage to ensure that all social groups can equally access CBD Metro stations and platforms, integrating with the wider transport network.

9.4.3 Barriers to Movement, Facilities and Services

As the CBD Metro will be located predominantly underground, post construction potential disturbances above ground will be significantly less obtrusive than alternative forms of transport (such as roads, bus lanes or heavy rail infrastructure). As a result, the potential for CBD Metro related infrastructure to isolate communities, or create physical or psychological hindrances to movement will be minimised.

In many cases, access will also be enhanced through the provision of new pedestrian links, providing a social benefit. Examples of project related access way improvements include:

- A pedestrian link under the traffic dominated Victoria Road. This pedestrian access way will reduce conflict between motorists and pedestrians at the junction of the two roads enhancing pedestrian safety and connectivity;
- A pedestrian link from the Barangaroo-Wynyard Station to the City Rail Wynyard Station. The new underground link will enhance the ease and safety of pedestrian travel and minimise conflict with vehicle traffic around the station and the current Wynyard Bus Interchange;
- The extension of the pedestrian and cycle space from Union Square east along Union Street to the junction with Pyrmont Street (Pyrmont Station Alternative 2 only);
- A pedestrian underpass on George Street from Central Station; and
- Options to provide a pedestrian link from Lilyfield Road across the former Rozelle Marshalling Yards to Annandale and Glebe.

During construction, the project will create physical barriers to social groups and local communities. This would be a direct result of the location of construction sites within public areas, the need to alter public access ways, and the need to modify pedestrian flows as well as cycle paths to facilitate construction equipment and works. This would have a temporary negative social impact and will need to be minimised and mitigated during construction by various methods. This is discussed further in Chapter 14.



9.5 Social Impacts of Property Acquisition

In order to enable the construction of the project and the provision of station entry and exit points, it is imperative for Sydney Metro to acquire various sites within the Station radii. Chapter 8 identified these sites by location.

The acquisition of residential, business or community properties for infrastructure works can have significant social impacts to property owners and / or tenants as well as clients or user groups. The prospect of one's property being acquired can be a daunting matter and requires careful management to minimise any associated stress. Anxiety and social stress can be created as a result of the process owing to:

- Uncertainty with respect to why the property in question is, or may be, acquired;
- The brevity of time in which the property is acquired;
- The brevity of time in which existing uses and services are required to relocate;
- The need to find alternative, suitable properties, at affordable costs and in appropriate locations; and
- The cost and inconvenience associated with relocation.

Where possible, Sydney Metro is seeking to avoid the need to acquire properties. However, owing to the technical aspects of the project, in some cases compulsory acquisition is unavoidable. Sydney Metro is committed to ensuring that any acquisition is conducted in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991* as described in Chapter 8. Furthermore Sydney Metro's review of the current property market has identified a 7-12% vacancy rate within Centres across the Study Area. Accordingly, Sydney Metro is confident that there is sufficient scope to relocate existing businesses within these areas.

During acquisition and following relocation there are social impacts that should be considered including the loss or disruption of community linkages, cohesion and services. This can be a particular matter of concern for businesses and community services that serve a specific catchment or trade area. It can also be a major concern for residents that may be required to relocate away from local communities and cultural networks leading to isolation and social severance.

In all cases, to minimise negative social impacts as a result of acquisition, it will be important to engage with the affected parties as soon as practical, to share relevant information and work cooperatively. It will also be important to ensure that the displaced parties find suitable alternative locations with minimal disruption.

The following section identifies how the relocation or loss of businesses within the Station radii (as a result of the acquisition process) could affect the provision of services to the Study Area's community.

9.5.1 Rozelle Station

To enable the construction of the project, a range of businesses will require acquisition and therefore relocation or extinguishment in Rozelle. The businesses in question range from restaurants, take-away food stores, backpackers accommodation, an electrical store, a bedding store, a pharmacy, a photography studio and personal services such as a barber and physical therapy studio.

The businesses to be acquired and relocated within the Centre are not key anchor tenants that underpin the function of the Centre or have a flow on influence to the trade of surrounding retailers. Accordingly their temporary closure for relocation will not significantly undermine the attraction of the Centre to shoppers to its detriment.



Furthermore each of the uses described above are not unique within, or to, the Rozelle centre. This means that there are a range of alternative retail establishments that may provide dining, barber, pharmaceutical, furniture or electrical services to the local community either within the Rozelle Centre or adjacent centres. Furthermore, with the exception of the Pharmacy, each of the uses described above do not provide a critical community service and therefore their temporary closure during relocation is not considered a significant social impact.

The Pharmacy associated with the building to be acquired at 134 Victoria Road is an exception to the latter position as the provision of medicine and health advice is an imperative factor in the well being of the community. It is important to note however that the pharmacy building to be acquired is presently vacant as it has been undergoing redevelopment for over two years. The associated businesses / building owner is presently trading as the Health and Beauty Pharmacy in a temporary location at 128 Victoria Road, 7 days a week between 8am and 10pm.

Whilst the identification of a permanent location for the Health and Beauty Pharmacy may result in a short term closure of the business, the impact to the community will be minimised owing to the alternative pharmacies presently operating within Rozelle and within walking distance of the site to be acquired. Both of the existing alternative pharmacies operate 7 days a week however they close at 9pm at night as opposed to the 10pm closing time of the Health and Beauty Pharmacy in its temporary location. The difference in service availability during relocation, as a result of the one hour's difference in operation is considered a minor impact.

In summary, given that the individual businesses to be relocated within Rozelle do not play a critical role to the economic function of the centre and have similar alternative facilities either within or surrounding the centre, the proposed acquisition and relocation of businesses is considered a slight negative impact.

9.5.2 Pymont Station

Four buildings will require acquisition to enable the project to be constructed in Union Street, Pymont. Whilst Pymont Station Alternative 2 only seeks to partially demolish four of the three buildings, owing to the nature of works it will not be possible for the associated businesses to continue to operate during the construction of the project. The businesses associated with the buildings in Union Street include: a restaurant, a clothing store and a tea shop. The fourth building is presently unoccupied.

With respect to the individual businesses to be affected by the project in Pymont as a result of acquisition, none play a critical role in the provision of services to the local community that could not otherwise be accommodated by existing alternative specialty food or dining options. Furthermore, the businesses in question are not recognised retail anchors for the centre.

Whilst the relocation of businesses such as the restaurant will reduce the existing range of dining choices in the Centre, this is not considered a significant social impact to the provision of community services in the area.

9.5.3 Barangaroo-Wynyard Station

To enable the construction of the Barangaroo – Wynyard Station, it will be necessary to acquire some retail and commercial units located within and around the existing Wynyard Station entrance. The retail units provide a range of take-away food and drink options as well as a travel agent and commercial electrical supplies.

The relocation and temporary unavailability of these businesses will create a minor inconvenience for existing rail passengers, local workers and businesses that regularly use these facilities. Notwithstanding this inconvenience, the range of retail that will continue to be provided within and



surrounding the Station will ensure a wide diversity of choice and supply is maintained. Accordingly the acquisition of businesses in the vicinity of the Barangaroo – Wynyard Station will have a negligible negative impact to community services.

9.5.4 Martin Place Station

To enable the construction of the Martin Place Station a number of retail and commercial services will require relocation. With respect to retail provision, these services include a take-away food store within the existing Martin Place Station entrance and a convenience store in Elizabeth Street. In light of the wide variety of existing food retailers catering to the local office market and the number of existing local convenience stores in the vicinity of the Station, the temporary closure and relocation of these businesses is a negligible negative impact to the provision of local community services.

9.5.5 Town Hall Square Station

To enable the construction of the Town Hall Square Station it will be necessary to acquire a range of retail and commercial services. Ground floor retail includes a large clothing store, hotel and restaurant, a food court, telephone store as well as a Woolworths Supermarket.

In summary the uses proposed for relocation at Town Hall are well catered for in the locality surrounding Town Hall. The only exception to this is the Woolworths Supermarket which is the only supermarket operated by this retailer within Sydney CBD. Notwithstanding this, there are no less than 5 alternative supermarkets (operated by two different companies) within close proximity / walking distance of Town Hall Station. Accordingly, the impact to service provision for the community is considered slight negative.

9.5.6 Central Station

It is not anticipated that the project will require the temporary closure or relocation of existing businesses in the vicinity of the CityRail Central Station. Accordingly, there are no identified resulting adverse impacts to the provision of community services.

9.6 Housing

The minority of the properties identified for acquisition are residential in use. To date those identified include three houses at 170, 172 and 174 Victoria Road, Rozelle.

In accordance with the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991*, the acquisition of these properties will incorporate a package of relocation expenses including compensation, legal expenses, stamp duty and solatium.

In order to minimise the social stress and anxiety of their relocation, Sydney Metro has made a commitment to work with each individual tenant to fairly and sympathetically address their needs.

9.7 Amenity and Access to Public Spaces and Places

The construction and operational phases of the project will affect how local spaces are used by social groups and communities. The CBD Metro will also influence the identity of these localities and the ability of social groups to integrate within these areas. The impact of the project to the use of various public spaces and places within the Study Area is discussed further below.



9.7.1 Union Square and Union Street

Union Square has developed as a focal point for social interaction and gathering in Pymont owing to a combination of factors including its central location, the mix of surrounding uses (including cafes and retail services), its aesthetic character, and its ability to host public events such as Christmas carols, Anzac Day ceremonies and street fairs.

Union Square and Union Street also act as pedestrian and cycle thoroughfares for travel to and from home, work and retail facilities. The quality and character of the heritage buildings located along Union Street and Union Square are also highly valued by local groups as a reminder of the history of the area, in contrast to the vast redevelopment that has occurred in the local over the past two decades.

In light of the above reasons, the potential use of Union Square for construction purposes is a key social concern of local residents and groups. The use of the Square for the entire construction period would have had a negative impact to social cohesion and the identity of Pymont as there would be no alternative public meeting place for the wider community.

The project has been subsequently amended so that Union Square will not be required for construction purposes and will remain publicly accessible for the duration of works.

Striking a balance with the social benefits of maintaining Union Square as a publicly accessible space during construction is the need to acquire properties at 3 - 9 Union Street. It is important to note that the two options for Pymont Station require the acquisition of these properties and the relocation of the existing businesses during construction. Alternative 1 requires the complete demolition of all four buildings however Alternative 2 seeks to retain the majority of the properties at 3 – 7 Union Street and hence their contribution to the character of the streetscape.

The location of the station entrance and exit points is also a relevant social matter. This is because they will influence the use of Union Square as a public meeting space and the ability for people and commuters (i.e. cyclists on the bike path) to travel through Union Square. Pymont Station Alternative 2 would ensure that the station entrance is well separated from the operational activity and pedestrians in Union Square and Union Street however it is less visible from these spaces than Alternative 1.

Part of Union Street, between Pymont Street and Union Square will be required to facilitate the construction of Pymont Station. Pymont Station Alternative 1 will require a lesser component of Union Street for these purposes maintaining some vehicle access along Union Street during the construction phase as well as cycle and pedestrian access along the façade of the buildings on the northern side of the street.

Pymont Station Alternative 2 would require a greater component of Union Street for construction purposes thereby further restricting the use of outdoor areas for dining or access. Alternative 2 would be likely to have a more intense yet shorter construction period than Alternative 1.

The extended use of Union Street for construction would also necessitate the removal of a greater number of trees thereby having a short term adverse visual impact. This option would however have an overriding positive longer term impact as a result of the retention of the predominant share of the buildings of heritage character at 3 - 7 Union Street and the replanting of trees.

The use of Union Street for construction purposes will have a negative influence to pedestrian, bicycle and vehicle movement within and around the centre as well as access to businesses and cafes. Furthermore construction activities in Union Street will have a negative impact to the enjoyment of using Union Square during the construction process in addition to moving around the centre for shopping or leisure purposes.



Upon operation, Pyrmont Station Alternative 2 proposes the extension of the existing pedestrian space at Union Square east along Union Street to Pyrmont Street. This would create a social benefit for the local community through the extension of available space within the centre. For either alternative the level of social interaction within Union Square and the associated retail centre is likely to improve substantially from the existing case.

Social awareness of the Square will also improve on account of its improved accessibility. As more people will be able to access the centre (particularly through methods other than the car) the centre's pedestrian appeal and role as a local meeting and recreation space will be positively influenced.

9.7.2 Rozelle High Street

The consultation process identified the significant social value placed on the unique character and 'village feel' of the Rozelle centre. However, the project may affect the existing character of the centre as a result of:

1. The uplift in land value and attraction of residing/working in Rozelle owing to its proximity to the CBD Metro. This could have a knock on effect to development pressure around the junction of Darling Street and Victoria Road altering the existing lower scale, finer grained character of Darling Street; and
2. The design character of Rozelle Station and associated structures. The quality and character of these features will have a prominent visual impact to the character of Rozelle and could better integrate both sides of Darling Street though the proposed pedestrian underpass.

The proposed underground walkway across Victoria Road will have a positive social impact and received support when discussed during consultation sessions. The walkway will better integrate the proposed Balmain Tigers Leagues Club site redevelopment with the existing retail centre. The creation of an effective model interchange at Rozelle Station for taxis, bicycles and buses will also have a positive social influence.

9.7.3 Martin Place

Martin Place is a major public thoroughfare in Sydney CBD, whilst also functioning as a public forum for events, leisure and passive recreation. Martin Place is an important identity of Sydney CBD.

The proposed construction site at Martin Place will use a central component of this space, whilst still allowing for continued pedestrian access to either side of the forum. Whilst access will be retained, the reduced area for passive recreation, combined with any increases in construction noise and disturbances are likely to negatively affect the enjoyment of this space during this period. A section of Martin Place, close to the MLC Centre will also be hoarded off during construction. This would reduce the ability for city workers to use this public space during lunch hours and before and after work.

In summary the use of Martin Place during the construction period will have a negative social impact on the community; however the impact will be minimised through appropriate mitigation measures as discussed in Chapter 14.

9.7.4 Town Hall Square

The City of Sydney Council has identified the social need and value of creating a new public space in Sydney CBD to be referred to as Town Hall Square. The proposed social and cultural space would provide an alternative, and fit for purpose, meeting place opposite the 'old Town Hall steps'. Whilst the land use components and layout of the potential Town Hall Square are yet to be determined, opportunities for new cultural and community facilities (such as a library) have been identified.



As part of the Sustainable Sydney 2030 vision, the City of Sydney Council has been acquiring sites in the proposed location of the 'Square' (at the intersection of George Street, Park Street and Pitt Street). The sites on the corner of Pitt and Park Streets correlate with the CBD Metro's proposed construction sites.

Whilst the provision of the Town Hall Square does not form part of the CBD Metro Project Application, it is recognised that the provision of the Town Hall Square Station and the project demolition and construction process may assist in facilitating the development of a successful and vibrant square. The Square would be a positive addition to existing amenity around Town Hall Station, benefiting the wide range of social and cultural groups that use it.

9.7.5 Central Station

In order to facilitate the development of Central Station, a construction site is proposed for the western side of the existing Central City Rail Station between Eddy Avenue and Pitt Street. This site is currently used as the interstate bus terminal. The bus terminal and associated uses will require relocation during the construction period.

In order to minimise the social implications of the temporary relocation of these facilities and to minimise disturbance to the movement and amenity of existing users of the Station, clear signage and access to the relocated facilities will be required. Information regarding the works and alternative access points will also assist in minimising social impacts as a result of confusion and anxiety, particularly for tourists to Sydney and regional or interstate visitors.

9.7.6 Belmore Park

The CBD Metro Project proposes the use of a component of Belmore Park for the construction of Central Station. The construction site is to be located on the southern side of the Park adjacent to Eddy Avenue.

The use of the Park for construction purposes would have a negative social impact with a reduction in public parklands available for social and recreational activities by local workers and visitors. The Park serves as a breakout space for local workers during lunch hours and as an amenity space for tourists staying in the locality. The use of part of Belmore Park for construction will affect the respite function of the Park for occupants in the surrounding dense inner city area.

However, this social impact would be temporary (i.e. during the necessary construction period for Central Station) and the portion of the Park used for construction purposes will be returned to public use upon completion of works. Furthermore a station entrance will be provided on the northern side of Eddy Avenue to better integrate the Park with Central Station.

9.8 Access to Community and Public Facilities

A number of community and public facilities will be directly affected by the project. The likely impacts to these facilities and areas are discussed in greater detail below.

9.8.1 Rozelle Neighbourhood Centre

Rozelle Neighbourhood Centre is located at 665a Darling Street, Rozelle. The not-for-profit organisation provides a broad range of community uses and services for people with special needs including:

- Community based projects (theatres, art classes and social BBQ's);



- Referral information and advocacy assistance;
- Respite and support services; and
- Programs for intellectually disabled people.

The facility also provides an occasional day care facility. Occasional Care is a service for parents who need short term care during work hours for children under school age. This facility is principally managed and operated by Leichhardt Municipal Council.

Operating since 1973, the Rozelle Neighbourhood Centre plays a pivotal role in the social cohesion and support of people with special needs and social challenges in the locality. Centrally located in Rozelle, the Centre operates within a hall that is rented from the Presbyterian Church. The facility does not however function as a place of worship.

The central location of the facility is important, creating both a general community awareness of the facility together with good access for intellectually, mobility or sensory impaired visitors.

In order to facilitate the construction of Rozelle Station, a component of the open space located to the rear of the Neighbourhood Centre, along the boundary with Victoria Road, will need to be acquired for use as a construction site. The area is presently primarily used by the child care centre. The operators of the Neighbourhood Centre have also identified the importance of the open space for other non child care related uses and services provided by the Centre.

Sydney Metro has made a commitment to work closely with the Rozelle Neighbourhood Centre to gain a better understanding of the potential implications of the project and whether the requirement for a portion of the centre's rear outdoor area will necessitate the relocation of part (or all) of the Centre's operations.

Should relocation be required, Sydney Metro has committed to sourcing an alternative suitable property, undertaking the necessary fit out, and project managing the relocation at no cost. Sydney Metro has also committed to facilitating the continued operation of the social services provided by the Centre. These commitments will be important in minimising any negative impact of the project to the community.

Furthermore, as the Balmain Tigers League Club site has been identified for acquisition and use as a construction site, the distribution of construction works can be shared across the two sites as opposed to the majority of the works occurring to the rear of the Rozelle Neighbourhood Centre. Accordingly should the centre not require relocation, the addition of the Balmain Tigers Leagues Club construction site will assist in minimising construction impacts.

9.8.2 Balmain Tigers Leagues Club

The project incorporates the use of the Balmain Tigers League Club site as a construction site. The use of the site was identified as an alternative to the construction site initially proposed to the rear of the Anglican Church incorporating the Church Hall and St Thomas Child Care Centre.

The Balmain Leagues Club is a sporting club that plays a role in the identity of the Balmain community. The club provides a range of dining, entertainment and leisure activities for local residents and sports club supporters. In August 2008, the Leichhardt Municipal Council Local Environmental Plan was amended to facilitate the redevelopment of the Balmain Leagues Club site. The amendment permitted the rezoning of the site to provide a mix of business, office, residential and retail uses with a maximum overall floor space ratio of 3.9:1.

Sydney Metro proposes to work cooperatively with the Leagues Club to utilise the site to construct Rozelle Station. Prior to construction of the CBD Metro project, relocation of the Balmain Tigers



League Club would have already been undertaken as part of the planned redevelopment of this site. Whilst the Club is required to close to enable the redevelopment of the site, the use as a station construction site would lengthen the period of time and reduce opportunities for existing members to meet and interact.

The location of the station entrance and exit points as well as the pedestrian underpass will be designed to link with the future uses on the Balmain Leagues Club site and enhance integration between the site and the existing Rozelle centre. Upon operation of the CBD Metro, and the completion of the sites redevelopment, this will have a positive social impact to the local business community and social groups.

9.9 Disturbances to Social Amenity

During the construction process the project has the potential to negatively affect the amenity and effective operation of a number of sensitive receivers including community facilities, places or worship, residential dwellings and work places. These impacts may be exacerbated in some locations where the construction programme requires 24 hour operation in order to meet project milestones. In many areas, the impacts may be compounded by non related developments occurring concurrently.

Whilst the majority of works undertaken in the evening will be underground (such as tunnel boring) it will be necessary to remove spoil from the site and therefore use machinery to raise spoil to ground level during day and evening. Vehicle movements will be required in the day and evening to transport spoil from various construction sites to White Bay. Vehicles will also be required to access sites across the day, affecting the movement and circulation of traffic and pedestrians.

*“The construction of this project will cause serious problems in an area that is already experiencing significant problems, such as congestion”
(Rozelle resident)*

The demolition of buildings, tunnel boring and construction works also have the potential to generate dust particulates and to generate noise levels that exceed existing background levels.

The construction phase of the project therefore has the potential to create negative impacts by way of:

- Airborne noise from tools, plant and machinery, generators and additional traffic movement;
- Vibration and regenerated noise as a result of tunnelling or rock breaking and cavern excavation;
- Air quality as a result of construction works and spoil storage (i.e. dust);
- Traffic congestion as a result of additional vehicle movements and disruptions to existing traffic flows; and
- Light as a result of evening construction works.

Various locations have been identified as particularly vulnerable to disturbance. These locations and their associated uses include:

- Rozelle – the Anglican Church, Rozelle Public School, Rozelle Neighbourhood Centre, Rozelle Markets, businesses and residences along Darling Street and side streets, commuters passing through the suburb on Victoria Road;
- White Bay – particularly residential dwellings located to the north of the site in Rozelle and Balmain as well as businesses in the vicinity of the site, such as those presently operating on Sydney Ports and NSW Maritime land;



- Lilyfield and Annandale – particularly residential properties along Lilyfield Road that may be affected by the construction and operation of the stabling yards and depot;
- Pyrmont – residents and businesses within and surrounding Mount / Miller Street, Union Square and Union Street, as well as cyclists and pedestrians passing through Pyrmont;
- Wynyard – the mix of commercial, retail, service, tourist and residential occupiers surrounding the construction sites, users of open space such as Wynyard Park, and commuters using Wynyard bus interchange;
- Martin Place – the mix of commercial, retail, service and residential occupiers surrounding the site in addition to the daily users of Martin Place for passive recreation purposes;
- Town Hall - the mix of commercial, retail, service and residential occupiers surrounding the site, together with visitors and tourists to the area, and general vehicle and pedestrian traffic around the station; and
- Central - the mix of commercial, retail, service and residential occupiers surrounding the site in addition to visitors and tourists to the area, existing users of the City Rail Central Station, users of the bus and taxi interchange, and users of Belmore Park.

Preliminary noise testing has found that construction noise levels in station locations may exceed design goals for daytime activities. In many cases this would be a result of the close proximity of sensitive receivers to the construction sites. There is also the potential for the generation of dust and traffic congestion.

Accordingly, the project construction would negatively affect the amenity and operation of sensitive uses surrounding the CBD Metro construction sites if left unmitigated. Sydney Metro recognises this likely social impact and is therefore committed to working with affected parties to better understand the implications of the project to their daily routine and effective operation, and to identify measures to minimise these impacts. A range of potential mitigation measures and management plans to address these matters are discussed in Chapter 14.

Upon completion of construction works and during operation, impacts to the amenity of residents, workers and visitors would be considerably reduced. During operation, noise and vibration modelling has found that the risk of building damage from train operations in a tunnel environment is negligible. Notwithstanding this, a number of mitigation measures will be required to control the level of noise generated by the CBD Metro's operation (so that it does not disturb the function of sensitive receivers) through appropriate design, management and maintenance measures.

9.10 Visual Amenity and Land Use Integration

The visual impact of the project and how it integrates with existing (or future) land uses is an important social matter. The integration of the stations, their entry and exit points with the local built environment will have an important influence on the character and social identity of areas within the station radii.

During construction, the visual integrity and character of areas would be affected by:

- The visual impact of vacant sites (as a result of demolition) and construction sites. This could negatively impact the social identity and character of spaces such as Union Square, Rozelle centre, Martin Place, Town Hall and Central. Each of these places and spaces play an important public role and are inclusive of heritage features with vistas to and from heritage buildings that form part of the intrinsic value of the structures;



- The visual impact of construction hoardings, acoustic sheds over sites, construction worker sheds and compounds, plant equipment and other machinery. This would be a particular matter of concern in conservation areas or locations closely connected to heritage items.

Upon operation, potential visual improvements, integration with surrounding uses and social benefits may arise from:

- The architectural design of stations and their integration with the local architectural fabric or the established character of areas;
- The design of the Rozelle stabling and maintenance depot and its impact to the amenity of Lilyfield suburb;
- The extension of the pedestrian and cycle space from Union Square east along Union Street to the junction with Pymont Street (Pymont Station Alternative 2 only);
- Options to enhance visual and physical connectivity between the suburbs of Lilyfield and Annandale;
- The location of station entry and exit points and their relationship with existing open spaces, pedestrian spaces and bicycle lanes;
- The layout and operation of transfers with other modes of transport and how coordination between uses can be improved;
- The movement of people once they alight from the CBD Metro and how effectively they are able to move from an area using alternative means of transport; and
- How the CBD Metro will physically link with cycle lanes and the provision of bicycle parking areas.

Studies³⁶ undertaken by various transport agencies have identified the importance of 'context sensitive' design so that structures and access points are clear yet unobtrusive, and are attractive and in keeping with the features of the local environment. A 'one style fits all' approach often does not support local character and social identity.

9.11 The Perception of Safety

The safety and security of underground rail stations was a front of mind concern for many people consulted during the preparation of this study. A great deal of concern related to the prospect of antisocial behaviour, theft or personal safety threats in isolated or unsupervised station areas outside of peak weekday periods. The depth of the stations below ground was commonly cited during community consultation as a concern because of the perceived need to travel a long distance without passive surveillance.

During the construction phase of the project, 41% of people interviewed believed that the security and safety of areas surrounding the station locations would be negatively affected and between 40% and 50% were unsure. Whilst many felt safety would improve upon operation, 46% of respondents were still unsure of the impact, and 24% believed safety and security would be worse than at present.

International studies show that the design of stations (both internally and externally), transport interchanges, the environment approaching the interchanges, lighting, and supervision are all aspects

³⁶ Does the Built Environment Influence Physical Activity? Examining the Evidence, Transportation Research Board, USA



that will influence the perception of safety and in turn the degree of use of public transport. This is particularly the case for more vulnerable social groups such as the elderly and women³⁷.

The same studies found that the main reasons commuters felt insecure using metro systems was due to the distance of the platform underground and the lack of staff supervision. These concerns are considered particularly pertinent for the CBD Metro given existing community sentiment regarding station depth and the absence of drivers on trains.

Around stations the main perception of fear resulted from the nature of access to and from interchanges and car parking areas ancillary to stations.

Effective mechanisms found to reduce the perception of fear and the propensity for vandalism and crime around transport nodes includes: the use of anti graffiti paint; CCTV cameras; good lighting; publicity campaigns to promote good behaviour; local ownership of stations and known hotspots; neighbourhood policing around stations; and, alcohol exclusions zones.

Other security and safety concerns may arise as a result of terrorism and their association with underground metro networks (as in the case of the London and Madrid terrorist attacks). These concerns will need to be managed through visual aids and information briefings, as a means to ensure peace of mind when using the CBD Metro.

9.12 Access to Employment and Education

As outlined in Chapter 7, the project will directly generate 12,467 job years³⁸ over the construction period and 275 jobs per annum upon operation. What is more, the capital investment and construction of a major infrastructure project such as the CBD Metro has a strong multiplier effect to other industries and the wider economy.

Employment has become a major social matter with unemployment rates rising in response to changes in the national and global economic climate. In addition, the nature of employment is changing as traditional inner city industries (such as manufacturing) are becoming increasingly suburbanised and less labour intensive whilst other industries (such as the knowledge and service industries) are growing in scale and importance in response to Sydney's role as a global city.

Changes to the type of employment generated and its availability is increasing demand for access to jobs, particularly knowledge based jobs in centres. Demand for access to educational institutions is also growing for not only school leavers but for employees seeking to enhance skills or to re-skill. With 12% of all jobs in the Sydney SD and major tertiary educational institutions, access to Sydney CBD and inner city areas are important factors in society's ability to enhance employment opportunities.

Accordingly, with respect to employment opportunities, and in light of the growing rate of unemployment in NSW, the project is considered of social benefit in a number of ways as follows:

1. It directly generates employment in the development and construction industries;
2. It indirectly generates jobs through economic stimulants to other industries and multipliers;
3. It enhances the ability for a range of social groups to access employment opportunities; and
4. It enhances the ability for a range of social groups to access educational opportunities.

³⁷ Department of Transport United Kingdom, Crime and Disorder on Public Transport Guidelines

³⁸ 1 job year represents 1 job for one year



9.13 Health and Well-Being

The Premiers Council for Active Living recognises that the physical environment is a major factor in the health and well-being of society. The CBD Metro would help to improve the physical and mental well being of the commuters and social groups it would serve thereby having a positive social impact.

9.13.1 Physical Well Being

The important link between the physical environment, physical activity and well-being is now widely recognised and acknowledged¹³⁹. The provision of a safe, reliable and accessible rail service is one element of the built environment that can positively influence commuter's behaviour away from car use to public transport use. In turn the use of public transport encourages people to walk as they need to access stations and destinations on foot once exiting the station.

Whilst the level of physical activity generated as a result of this shift will be modest (walking to and from stations) the increase in activity is still considered positive as *“Even small increases in physical exercise can have important health and economic benefits”*⁴⁰.

Using public transport enables people to include more physical activity into their lives by walking or cycling to stations. In turn, the use of alternative means of car transport (such as the metro) can have other social health benefits including improved air quality, social cohesion and greater access to a range of healthy food retail opportunities. Studies have also found that as a result of increased physical activity *“community spirit and social networks are encouraged in vibrant, mixed use centres and in walkable neighbourhoods”*.

9.13.2 Mental Health

Exercise and physical activity such as walking also improves psychological well being and reduces the risk of anxiety and depression. The provision of accessible, reliable and attractive transport options to work and home can also have a positive influence on society's mental health. Benefits may be achieved by reducing stress associated with traffic congestion and by reducing travel times, thereby allowing for additional recreational time, or time with families and friends.

9.13.3 Social Cohesion

A greater number of people walking to and from transport nodes within centres creates active, vibrant and mixed use areas that have positive influences to community spirit and social networks which are all important contributors to mental health. Social support provides people with the emotional and practical resources they need.

The World Health Organisation recognises the importance of locating and designing facilities (such as metro stations) to encourage meeting and social interaction. This is relevant to the proposed location of the project's stations and the prospective creation of new public spaces and facilities for commuters (such as café's and outdoor areas). In this respect, the project has the potential to facilitate the City of Sydney's vision for a new public domain area at Town Hall Square.

³⁹ NSW Health et al Creating Healthy Environments, NSW Centre for Overweight and Obesity (2005)

⁴⁰ Does the Built Environment Influence Physical Activity? Examining the Evidence, Transportation Research Board, USA



9.14 Air Quality

In keeping with the theme of health and well-being, is the affect the project may have to air quality. Whilst air quality is an environmental issue addressed separately in the Environmental Assessment, the matter does have social impacts. These impacts correspond to the negative impacts poor air quality can have to the health and well-being of the society it affects.

Upon operation, the provision of an accessible, affordable and efficient CBD Metro will provide an opportunity to encourage a movement away from private car use. A reduction in the proportion of people using private vehicles to access destinations within inner city areas will become a growing matter of importance as the number of jobs and residential dwellings in these locations are forecast to grow substantially over the next 25 years (as discussed in Chapter 5).

Whilst cars individually do not create significant impacts to the environment and climate change, collectively they have a major impact. Cars are the main source of photochemical smog in cities. As of 2000-2001, emissions generated from cars were estimated to account for 60% of carbon monoxide in Sydney⁴¹.

Industries such as manufacturing in addition to other modes of transport (rail, shipping and aircraft) all contribute to air and noise pollution. Notwithstanding this, the level of human exposure to cars and their sheer volume on roads in close proximity to where we live, work and spend time increases their impact to local communities. Furthermore, owing to the density of inner city environments (such as Sydney CBD, Pyrmont and Rozelle) the level of pollution created is enhanced and concentrated.

A study undertaken by the Bureau of Transport and Regional Economics⁴² found that the health affects of air pollution range from subtle or mild affects through to asthma and premature mortality. Mild affects may relate to ill health, reduced ability to undertake tasks or physical activity.

In 2000, the same study found that motor vehicle related ambient air pollution resulted in 900 to 4,500 cases of death. The pollution also accounted for between 900 and 2000 cases of early death from cardiovascular and respiratory diseases. This had an economic cost to Australia of between \$0.4 - \$1.2 billion dollars.

Accordingly, the modal shift from cars (even if only small to begin with) to less polluting public transport services can have social and health benefits as well as economic.

⁴¹ Department of Infrastructure, Transport, Regional Development and local Government, Bureau of Transport and Regional Economics, Working Paper 63 - Health Impacts of Transport Emissions in Australia: Economic Costs (June 2005)

⁴² Bureau of Transport and Regional Economics, Working Paper 63



10 Assessing and Rating Impact

This Chapter describes the methodology used in the following Sections of the study (Chapters 11 to 14) which assess the economic and social impacts of the project.

The impacts have been described and quantified as either:

1. Positive or negative;
2. Significant, moderate, slight or neutral;
3. Direct or indirect; and
4. During construction and / or operation of the CBD Metro.

Table 10.1 below provides a definition of the term provided under points one and two above. The definitions have been based on the rating levels recommended by the Strategic Merit Test which forms part of the *National Guidelines for Transport System Management in Australia (2nd Edition)*. The definitions have however been amended so that they are suitable for economic and social impact assessment.

Table 10.1 Assessment Rating Levels

Rating Level	Description
Significant Negative	Impacts with serious, long term and possibly irreversible effects leading to serious damage, degradation or deterioration of the economic or social environment. Requires a major re-scope of concept, design, location, justification, or requires major commitment to extensive management strategies to mitigate the effect.
Moderate Negative	Impacts may be short, medium or long term in duration and most likely to respond to management actions.
Slight Negative	Impacts have minimal effect, could be short term, can be mitigated and will not cause substantial detrimental effects. May be confined to a small area.
Neutral	No discernable or predictable positive or negative impact.
Slight Positive	Impacts have minimal effect, could be short term. May be confined to a small area.
Moderate Positive	Impacts may be short, medium or long term in duration. Positive outcome may be in terms of new opportunities and outcomes of enhancement or improvement.
Significant Positive	Impacts resulting in substantial and long term improvements or enhancements to the existing environment.

Source: Adapted from the Strategic Merit Test, National Guidelines for Transport System Management in Australia (2nd Edition)

Chapters 11 to 14 have also cross referenced the descriptions of impact provided above with the three geographic levels of influence identified by this study being:

- The 60m wide rail corridor safeguarded by the SEPP (Infrastructure) 2007;
- The station radii (i.e. 800m radius or 10 minute walk from stations); and
- The suburbs and LGA's that the CBD Metro would transverse.



11 Analysis of Economic Impacts

Table 11.1 below provides a review of the likely macroeconomic and microeconomic impacts of the project discussed in Chapters 7 and 8. The methodology applied to rating impact is consistent with the approach established in Chapter 10.

Table 11.1 Summary of Potential Economic Impacts During Construction

POTENTIAL IMPACT DURING CONSTRUCTION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
Macroeconomic Impacts		
Economic Cost of Congestion <i>Relating to the economic and business costs incurred as a result of traffic and transport congestion and constraints</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs and LGAs 	Moderate Negative: whilst the capacity of the existing transport services in Sydney would not change during construction their operation may be hindered. Furthermore the level of traffic congestion could be negatively affected increasing the economic cost to businesses and the workforce.
Economic Multipliers <i>Relating to economic activity in one industry and the flow on benefits to others</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs 	Moderate Positive: benefits of construction and job generation would flow through to the wider economy on commencement of the project's planning, design and construction works.
Land Value <i>Relating to the positive effect transport infrastructure projects can have to land values</i>	Property owners within: <ul style="list-style-type: none"> • Station Radii 	Slight Positive: land values surrounding stations would benefit upon approval for, and confirmation of, the project.
Domestic & International Tourism <i>Relating to the important contribution Sydney as a city makes to the tourist industry</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs 	Moderate Negative: as a result of construction disturbance and impacts to the environmental quality of the city and its enjoyment.
Employment Generation <i>Relating to the generation of construction and operation related employment as a direct and indirect consequence of the project</i>	Businesses and residents within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs 	Slight Positive: employment generation benefits would occur on commencement of the project's planning, design and construction works.
Microeconomic Impacts		
Property Acquisition <i>Relating to the necessary acquisition of properties to enable the construction and operation of the project</i>	Businesses within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: as a result of the disturbance created to business operation during relocation



POTENTIAL IMPACT DURING CONSTRUCTION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
Business Viability <i>Relating to project impacts that may affect the turnover and success of a businesses</i>	Businesses within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: whilst we have identified that some businesses would benefit from increased local activity, customers and demand for goods, the operation of some businesses would be negatively affected during construction as a result of noise, access, traffic, and vibration disturbances and changes to their customer base.

Table 11.2 Summary of Potential Economic Impacts During Operation

POTENTIAL IMPACT DURING OPERATION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
Macroeconomic Impacts		
Economic Merits of Agglomeration <i>Relating to the positive influence improved accessibility can have to building densities and therefore the ability for more businesses to cluster together</i>	Businesses within: <ul style="list-style-type: none"> • Station Radii 	Moderate Positive: enhanced opportunities for businesses to cluster together and benefit from increased productivity and innovation.
Economic Cost of Congestion <i>Relating to the economic and business costs incurred as a result of traffic and transport congestion and constraints</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs and LGAs 	Slight Positive: enhanced opportunities for safe, rapid and reliable public transport travel would encourage a modal shift away from private car use and therefore assist in reducing road and transport related congestion.
Economic Benefits of Public Infrastructure Investment <i>Relating to the positive influence public investment in infrastructure can have to private business productivity</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs and LGAs 	Slight Positive: a positive flow on benefit to the function and operation of private business and its productivity.
Land Value <i>Relating to the positive effect transport infrastructure projects can have to land values</i>	Property owners within: <ul style="list-style-type: none"> • Station Radii 	Slight Positive: land values surrounding stations would benefit from the operation of the CBD Metro and the increasing value placed on reducing travel times.
Domestic & International Tourism <i>Relating to the important contribution Sydney as a city makes to the tourist industry</i>	Businesses within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs 	Slight Positive: as a result of a high quality, accessible and reliable means of moving around Sydney (that can be easily understood by visitors) making Sydney a enjoyable place to visit.
Employment Generation <i>Relating to the generation of</i>	Businesses and residents within:	Slight Positive: modest benefits would continue during operation as

POTENTIAL IMPACT DURING OPERATION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
<i>construction and operation related employment as a direct and indirect consequence of the project</i>	<ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs 	a result of the permanent jobs generated through the management, maintenance and operation of the CBD Metro. New business opportunities would also be fostered by commercial outlets in new stations.
Microeconomic Impacts		
<p>Business Viability <i>Relating to project impacts that may effect the turnover and success of a businesses</i></p>	<p>Businesses within:</p> <ul style="list-style-type: none"> • 60m Corridor • Station Radii 	<p>Neutral: Affects would vary as some businesses would benefit from the operation of the CBD Metro owing to enhanced staff travel time, reduced congestion and associated business costs, and improved customer access. A small number of businesses would be negatively affected however as a result of increased competition from additional retailers in station locations, changed consumer base and behaviours during construction, and land value increases.</p>



12 Analysis of Social Impacts

Table 12.1 provides a summary of the likely social impacts of the project as discussed in Chapter 9 during both the construction and operational stages. The methodology applied to rating impact is consistent with the approach established in Chapter 10.

Table 12.1 Summary of Potential Social Impacts During Construction

POTENTIAL IMPACT DURING CONSTRUCTION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
Public Perception & Concerns <i>Relating to the perception of the project's details and impacts during different phases of development</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Slight Negative: owing to project uncertainties and concern regarding potential disturbances during construction there is the potential for social stress, confusion and anxiety.
Accessibility & Travel Times <i>Relating to the ease of access and duration of travel for employees, residents and visitors to various destinations</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Moderate Negative: likely impact as a result of congestion and disturbance associated with construction process.
Access & Social Equity <i>Relating to the effect of the project to access across the city, to and within the stations and to social services and needs</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Slight Negative: likely impact as a result of congestion and disturbance associated with construction process.
Property Acquisition <i>Relating to the social implications of property acquisition and the temporary / permanent closure of some businesses</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Significant Negative: likely impact (as a result of acquisition of private dwellings and community facilities) to owners and tenants as well as people who use the services. The impact to the community as a result of the closure / relocation of most businesses will slight negative.
Public Spaces and Places <i>Relating to the project's impact to the use of public places and spaces</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: as a result of restrictions to the use and enjoyment of some public and open spaces.
Community & Public Facilities <i>Relating to the project's impact to the availability of community and social facilities</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: likely restriction to the provision of services.
Disturbance to Amenity <i>Relating to the potential impacts to residential, commercial and community uses</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii 	Moderate Negative: negative impacts by way of noise, traffic, dust, vibration and light as a result of construction works and

POTENTIAL IMPACT DURING CONSTRUCTION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
	Suburbs	equipment.
Visual Amenity & Land Use Integration <i>Relating to the impact to the integrity and quality of the local built and natural environment</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: impact to the visual character, appeal and integration of places as a result of construction works, barriers and equipment.
The Perception of Safety & Security <i>Relating to the impact of the project to the perceived safety and security of the environment surrounding stations and work sites</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: potential impact to the perception of safety and security around construction sites and associated areas. Notwithstanding this, in some areas there may be improvements owing to greater activity in an area during the day and evening as a result of construction activity.
Employment & Education <i>Relating to the social benefits of the project with respect to direct employment generation and access to employment and education facilities</i>	Residents within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs and LGAs 	Slight Positive: local job generation in the construction and property industry. Slight Negative: possible impeded access (due to congestion) to jobs and education facilities in the Study Area.
Health and Well Being <i>Relating to the ability of public transport to increase physical activity, improve travel times and accessibility to employment and education</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Slight Negative: potential for stress relating to added congestion, reduced accessibility to services and general disturbance in local areas.
Air Quality <i>Relating to the impact of air quality to health</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Slight Negative: potential negative impact by way of dust from construction sites.

Table 12.2 Summary of Potential Social Impacts During Operation

POTENTIAL IMPACT DURING OPERATION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
Public Perception and Concerns <i>Relating to the perception of the project's details and impacts during different phases of development</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Moderate Positive: as a result of enhanced transport opportunities, reduced road congestion and improved environmental amenity.
Accessibility & Travel Times <i>Relating to the ease of access and duration of travel for employees, residents and visitors to various</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Slight Positive: improved travel times owing to direct time savings from the CBD Metro, the associated modal shift from cars reducing road congestion, and



POTENTIAL IMPACT DURING OPERATION	STAKEHOLDERS LIKELY TO BE AFFECTED	IMPACT WITHOUT MITIGATION
<i>destinations</i>		improved bus journey times.
Access & Social Equity <i>Relating to the effect of the project to access across the city, to and within the stations and to social services and needs</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs & LGAs affected 	Moderate Positive: improved travel across Sydney CBD, enhanced access for a range of users (to and within the stations), minimal above ground disturbance to movement, and better connectivity between places through new pedestrian and cycle links.
Public Spaces & Places <i>Relating to the project's impact to the use of public places and spaces</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Positive: improved accessibility to public spaces and places with opportunities created to enhance their social value and appeal.
Disturbance to Amenity <i>Relating to the potential impacts to residential, commercial and community uses</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs 	Slight Negative: potential for noise, vibration, light or dust disturbances as a result of the CBD Metro's operation in sensitive locations.
The Perception of Safety & Security <i>Relating to the impact of the project to the perceived safety and security of the environment surrounding stations and work sites</i>	Residents and social groups within: <ul style="list-style-type: none"> • Station Radii 	Moderate Negative: perception of vulnerability around and within stations in off peak periods. Moderate Positive: greater activity around stations, particularly during peak periods, enhancing feelings of safety and security through passive surveillance.
Employment & Education <i>Relating to the social benefits of the project with respect to direct employment generation and access to employment and education facilities</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii 	Slight Positive: enhanced access to jobs and employment opportunities generated through the operation of the CBD Metro, and new businesses occupying space within or over the stations.
Health and Well Being <i>Relating to the ability of public transport to increase physical activity, improve travel times and accessibility to employment and education</i>	Residents, employees and visitors within: <ul style="list-style-type: none"> • Station Radii 	Slight Positive: as a result of improved opportunities for exercise and social interaction to the benefit of general health and well being.
Air Quality <i>Relating to the impact of air quality to health</i>	Residents and social groups within: <ul style="list-style-type: none"> • 60m Corridor • Station Radii • Suburbs and LGAs affected 	Moderate Positive: as a result of reduced traffic congestion and car emissions.

13 Analysis of Cumulative Economic and Social Impacts

The construction and operation of the CBD Metro would not occur in isolation. Rather the project would form part of a wider complex urban environment, which would be experiencing change over the construction period and operational life of the project. When considered in isolation, the environmental impacts of any single project upon any single receiver may not be significant. However, significant effects may arise when individual effects are considered within the same project or together with other projects.

Accordingly it would be necessary to assess the likely impacts of the project with reference to other influences and their cumulative impacts. For the purposes of assessment there are two types of accumulative impact.

1. The accumulation of individual impacts that may separately not have an impact but may combine to have a significant effect (i.e. combined construction noise and traffic congestion); and
2. The accumulation of impacts resulting from the CBD Metro as well as other major construction projects occurring in the Study Area. These impacts are often difficult to define, predict and manage as a result of the separate proponents involved. Whilst these impacts are important to consider, for the preceding reasons, they are often better addressed on a strategic or regional level, preferably through the use of a coordinating body.

To inform the assessment of the second type of impact above, various major prospective developments were identified at the time of preparing this study. These developments are outlined below:

- The Terrey Street Site, Rozelle – the redevelopment of the former industrial site is currently being Master Planned by Leichhardt Municipal Council.
- Balmain Tigers Leagues Club, Rozelle – the rezoning for a mixed use development on the site has been approved however a detail application for development is yet to be submitted.
- The duplication of Iron Cove Bridge, the widening of Victoria Road and additional bus services.
- Star City, Pyrmont - approval has been granted for the development of a new 10 storey, 250 room, 5-star hotel as part of the Casino's expansion. Construction is expected to commence in mid to late 2009, with completion scheduled for 2011.
- CuB Site, Chippendale – a concept plan has been approved for a mixed-use development including apartments, offices, shops, restaurants and open space. Demolition has commenced and it is anticipated construction works will begin in 2010.
- Barangaroo – the concept plan for development has been approved with development forecast to commence in 2011.
- Overseas Passenger Terminal, White Bay – the development application is currently being assessed by the Department of Planning.
- Baileys Marine Refuelling Facility at White Bay Berth 6 – the development application has recently been approved by the Department of Planning.
- Energy Australia City East Cable Tunnel Project.



To provide a manageable assessment of the cumulative social and economic impacts of the project, the following assessment has concentrated on the station radii and key project issues. This methodology acknowledges that a variety of receiver types located in the same area may be considered together. Table 13.1 assesses impact to:

- Businesses (including hoteliers and tenants);
- Services (i.e. community facilities and services); and
- Society (residents, users of areas).

The temporal scope of analysis was confined to the construction period (2010 to 2015) and five years following the opening of the CBD Metro as the majority of project related impacts would occur at a local level.

Table 13.1 presents the locations likely to experience cumulative social and economic impacts as a result of the sum of individual components of the CBD Metro Project, and effects from other development projects. For the purposes of a succinct assessment, and in light of the Director-Generals Requirements for assessment, the social and economic impacts discussed in this report have been summarised into five categories being:

- Disturbances to amenity (i.e. noise, traffic, dust and vibration);
- Accessibility to various destinations and travel times;
- Impacts to the viability of businesses;
- Access to community services and public spaces; and
- Visual impacts.

Table 13.1 indicates where a likely cumulative impact would occur with a ✓. Where a cumulative impact is not expected to occur a ✗ has been given.



Table 13.1 Locations and Receiver Types that will Experience Cumulative Impacts

LOCATION	STAKEHOLDERS LIKELY TO BE AFFECTED	DISTURBANCES TO AMENITY	ACCESSABILITY & TRAVEL TIMES	BUSINESS VIABILITY	ACCESS TO COMMUNITY FACILITIES & PUBLIC SPACES	VISUAL IMPACT
Central	Businesses	✓	✓	✓	N/A	x
	Services	✓	✓	x	N/A	x
	Society	✓	✓	N/A	x	x
Town Hall	Businesses	x	x	✓	N/A	x
	Services	x	x	x	N/A	x
	Society	x	x	x	x	x
Martin Place	Businesses	x	x	✓	N/A	x
	Services	x	x	x	N/A	x
	Society	x	x	x	x	x
Wynyard	Businesses	✓	✓	✓	N/A	✓
	Services	✓	✓	✓	N/A	✓
	Society	✓	✓	x	✓	✓
Pyrmont	Businesses	✓	x	✓	x	✓
	Services	✓	x	x	x	✓
	Society	✓	x	x	x	✓



LOCATION	STAKEHOLDERS LIKELY TO BE AFFECTED	DISTURBANCES TO AMENITY	ACCESSABILITY & TRAVEL TIMES	BUSINESS VIABILITY	ACCESS TO COMMUNITY FACILITIES & PUBLIC SPACES	VISUAL IMPACT
Lilyfield	Society	x	x	x	x	x
Rozelle	Businesses	✓	✓	✓	N/A	✓
	Services	✓	✓	✓	N/A	✓
	Society	✓	✓	x	✓	✓



14 Mitigation Measures – Social and Economic

It is widely recognised practice for Economic and Social Impact Assessments to not only identify the impacts of a project, but to provide recommendations as to appropriate methods of minimising or mitigating negative impacts.

The U.S Inter-organizational Committee on Guidelines and Principles for Social Impact Assessment defines mitigation as a means of “*avoiding the impact by not taking or modifying an action; minimising, rectifying or reducing the impacts through the design or operation of the project or policy or compensating for the impact by providing substitute facilities, resources or opportunities (1994:15).*”

In light of this practice, Chapter 14 recommends methods of treating the economic and social impacts identified in Chapters 11, 12 and 13 (as negative only) through appropriate management and mitigation measures. General and specific measures are provided to mitigate both social and economic impacts.

The measures are then tabled according to the nature of their impact (tables 14.1, 14.2, 14.3 and 14.4) adjacent to the relevant corresponding impact post mitigation (economic or social, during construction or operation).

14.1 General Recommended Mitigation Measures during Construction

During construction the following methods of mitigation are recommended in order to minimise the likely negative economic and social impacts of the project to an acceptable level.

- Provide a **24 hour toll free number** during construction to ensure a prompt response can be given to ‘out of office hours’ construction related matters.
- Undertake property acquisitions and provide **appropriate compensation** in accordance with the *Land Acquisition (Just Terms Compensation) Act 1991*.
- Undertake **pre-construction dilapidation asset surveys** of buildings in close proximity to construction sites in order to assess and monitor any potential impacts to building structures.
- Prepare a **Framework Construction Traffic Management** and establish a **Traffic and Transport Liaison Group** that seeks to:
 - minimise the level of disturbance created as a result of construction related vehicle movements (particularly during peak periods) to the road, pedestrian and cycle network within, and influenced by, the Study Area;
 - minimise disturbances to pedestrian access ways and bicycle paths. Where changes are made to existing travel routes, suitable signage for alternative options should be provided and maintained during the period of works;
 - minimise disturbances to taxi stands, bus layovers, bus stops and footpaths and provides suitable alternatives where required;
 - minimise disturbances to the availability of customer and employee car parking spaces, business loading docks and servicing areas; and



- minimise disturbances to the effective operation and reliability of existing transport services such as buses and heavy rail.
- Prepare a **Framework Construction Environmental Management** that:
 - clearly demarcates construction sites and public safety zones particularly when using equipment that may induce vibration or other negative effects;
 - minimises the use of (and where required carefully locates) hoardings, construction fencing or other barriers that may hinder the visibility of business frontages;
 - balances the duration of overall works and respite periods and clearly justifies the requirements for working outside of the Department of Environment and Climate Change (DECC) recommended construction hours (i.e. 7am to 6pm Monday to Fridays and 8am to 1pm Saturday);
 - minimises the negative impacts of noise generated from construction related machinery and equipment to surrounding sensitive receptors (particularly during the evening) through the use of reasonable and feasible mitigation measures;
 - incorporates an Air Quality Management Plan that provides a Dust Control Program which minimises dust emissions and their transition to sensitive receivers as a result of works such as building demolition, spoil removal, storage or transportation;
 - minimises the extension of construction sites and the storage of equipment into public spaces and places; and
 - screens construction sites to minimise their negative visual impact to localities and the emission of dust and noise.

14.2 General Recommended Mitigation Measures during Operation

During operation of the CBD Metro the following methods of mitigation are recommended in order to minimise any negative economic and social impacts and to maximise the benefits.

- The **regular maintenance** of rolling stock and infrastructure to ensure air and ground borne noise levels and disturbances (as a result of train movements and related equipment usage) are kept to a minimum.
- The design of stations in accordance with the NSW Police Crime Prevention through Environmental Design (CTPED) strategy to provide **safe and secure environments** for users that minimises the potential for vandalism.
- Station design, access to stations and rolling stock to be **fully accessible** and wheel chair compliant. Station designs to incorporate tactile tiling and signage for sensory impaired persons.
- The implementation of **permanent mitigation measures** to minimise impact to sensitive receivers surrounding the CBD Metro stabling and maintenance facility and stations, particularly during evening periods.
- The implementation of station designs and **Construction Method Statements** that include a tunnel and station ventilation system to ensure air is well dispersed and does not affect any sensitive receivers above ground.



14.3 Specific Recommended Economic Mitigation Measures

The following measures are recommended to mitigate the specific, likely economic impacts of the project during construction.

- Prepare a **Consultation Involvement Plan** that facilitates ongoing correspondence and the notification of matters to affected businesses during the construction phase. The plan should also identify effective means for ongoing cooperation and communication with the business community.
- Retain Sydney Metro staff as **Place Managers** yet expand their remit so that they also become a point of contact for business queries and information during the construction process.
- Prepare a **Business Management and Assistance Strategy for Construction** that proactively identifies businesses that may be adversely affected by the project and suitable alternative premises for business owners, service providers and tenants to be relocated as a result of the construction of the project. The strategy should provide alternatives in terms of unit type, price points and locations to meet the range of business requirements and to streamline the process for affected parties. The Strategy should also include measures that minimise the impact of the project to the effective operation of businesses including a Retail Support Program. The Retail Support Program should provide assistance to smaller retail businesses that may be adversely affected during the projects construction.
- To mitigate the likely specific economic impacts of the project during operation it is recommended that the master planning of the stations are subject to a **Design Review Panel** and seek to create attractive environments that integrate effectively with existing land uses and provide a range of business opportunities.

14.4 Specific Recommended Social Mitigation Measures

The following mitigation measures are recommended to mitigate the specific, likely social impacts of the project during construction.

- **Exhibition of the project application and Environmental Impact Assessment** to provide clarity and certainty of the project details and likely impacts.
- Implementation of an effective and thorough **Community Involvement Plan**. The plan may seek to establish Community Consultation Groups in key areas for ongoing correspondence and information sharing during construction. The group would also assist in the effective dissemination of information to the broader community, monitoring of impacts and the effectiveness of mitigation measures.
- Retain Sydney Metro **Place Managers** as community contacts for project related enquiries.

The following mitigation measures are recommended to mitigate the specific, likely social impacts of the project during operation.

- The master planning of stations and station sites in association with a **Design Review Panel** to create attractive environments that integrate effectively with existing land uses and enhance the attraction of walking to and from the CBD Metro stations (thereby improving opportunities for physical exercise).
- **Master Planning** to enhance the integration of places (such as East and West Darling Street, Lilyfield and Rozelle as well as parts of the CBD) through the provision of pedestrian bridges, cycle networks and pedestrian paths.



14.5 Economic Recommendations

In order to minimise any negative economic impacts of the project, in addition to the mitigation measures listed above, it is recommended that Sydney Metro commits to:

- The ongoing review and revision of measures implemented by the project to ensure they effectively minimise negative impacts to the operation and function of businesses through all reasonable mitigation, management and maintenance measures;
- Working proactively and co-operatively with businesses that have the potential to be affected by the construction or operation of the project. It is recommended that Sydney Metro seeks to better understand the potential nature of the impacts to business function and therefore viability, in order to identify and implement appropriate mitigation measures or amendments;
- ‘Making good’ or providing appropriate compensation for any damages that may occur to properties as a result of the project’s construction or operation; and
- The preparation of a Business Management Strategy for Construction that incorporates relocation mechanisms that aim to find suitable alternative locations for businesses within the same locality or area in order to reduce business disturbance and to maintain the existing level of service to the local community.

14.6 Social Recommendations

In order to minimise any negative social impacts of the project, in addition to the mitigation measures listed above, it is recommended that Sydney Metro commits to:

- Working with residents, businesses and services that require relocation, on a case by case basis, to identify measures to minimise the associated social and socio-economic impacts of the project. Where appropriate (i.e. in the case of the relocation of elderly residents) the level of support provided by Sydney Metro may be required to exceed the requirements of the *Land Acquisition (Just Terms Compensation) Act 1991*;
- A Business Management and Assistance Strategy for Construction that identifies businesses to likely be affected by the construction works and mechanisms to minimise the impacts. A Strategy that finds suitable alternative locations (for community organisations that may be required to be relocated) within the same locality or area in order to reduce social disturbance and to maintain the existing level of service to the local community;
- A Consultation Involvement Plan that incorporates specific mechanisms to assist residents to be relocated, to find suitable alternative dwellings within the same locality in order to avoid the severance of social connectivity and existing social support networks for these residents; and
- Working closely with the Rozelle Neighbourhood Centre to gain a better understanding of the potential implications of the project to their operation, and whether relocation of part or all of the Centre’s operations would be necessary. Should part or complete relocation be required, it is recommended that Sydney Metro commits to sourcing an alternative suitable property for that component of the centre, undertaking the necessary fit out, and project managing the relocation at no cost.



Table 14.1 Recommended Mitigation Measures During Construction – Economic Impacts

POTENTIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
Macroeconomic Impacts		
Economic Cost of Congestion <i>Relating to the economic and business costs incurred as a result of traffic and transport congestion and constraints</i>	Framework Construction Traffic Management and establish a Traffic and Transport Liaison Group	Slight Negative
Domestic & International Tourism <i>Relating to the important contribution Sydney as a city makes to the tourist industry</i>	Preparation and implementation of: <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management • Construction Method Statements 	Slight Negative
Microeconomic Impacts		
Property Acquisition <i>Relating to the necessary acquisition of properties to enable the construction and operation of the project</i>	<ul style="list-style-type: none"> • Compensation in accordance with the <i>Land Acquisition (Just Terms Compensation) Act 1991</i> • Preparation and implementation of a Business Management and Assistance Strategy for Construction • A commitment by Sydney Metro to work closely with affected parties, on a case by case basis, to understand, tailor and adopt measures that minimise potential impacts 	Slight Negative
Business Viability <i>Relating to project impacts that may effect the turnover and success of a businesses</i>	<ul style="list-style-type: none"> • Creation of a business consultation group, a 24 hour toll free number and the retention of Place managers • Conduct a pre-construction dilapidation asset survey • Preparation and implementation of: <ul style="list-style-type: none"> – Framework Construction Traffic Management – Framework Construction Environmental Management – Construction Method Statements 	Slight Negative

Table 14.2 Recommended Mitigation Measures During Operation – Economic Impacts

POTENTIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
Microeconomic Impacts		
Business Viability <i>Relating to project impacts that may effect the turnover and success of a businesses</i>	Preparation and implementation of a Framework Construction Traffic Management and establishment of a Traffic and Transport Liaison Group - to ensure that changes to pedestrian and customer movements during	Neutral



POTENTIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
	construction do not negatively affect access to businesses upon operation	



Table 14.3 Recommended Mitigation Measures During Construction – Social Impacts

POTENTIAL SOCIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
<p>Public Perception & Concerns <i>Relating to the perception of the project's details and impacts during different phases of development</i></p>	<ul style="list-style-type: none"> • Exhibition of project application • Implementation of Consultation Involvement Plan 	Neutral
<p>Accessibility & Travel Times <i>Relating to the ease of access and duration of travel for employees, residents and visitors to various destinations</i></p>	<p>Preparation and implementation of:</p> <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management 	Slight Negative
<p>Access & Social Equity <i>Relating to the effect of the project to access across the city, to and within the stations and to social services and needs</i></p>	<p>Preparation and implementation of:</p> <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management 	Slight Negative
<p>Property Acquisition <i>Relating to the social implications of property acquisition and the closure / relocation of businesses to community services</i></p>	<ul style="list-style-type: none"> • Compensation in accordance with the Land Acquisition (Just Terms Compensation) Act 1991 • Preparation and implementation of Business Management and Assistance Strategy for Construction • A commitment by Sydney Metro to work closely with affected parties, on a case by case basis, to understand, tailor and adopt measures that minimises potential impacts 	Slight Negative
<p>Public Spaces and Places <i>Relating to the project's impact to the use of public places and spaces</i></p>	<p>Preparation and implementation of:</p> <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management • Implementation of a Consultation Involvement Plan 	Slight Negative
<p>Community & Public Facilities <i>Relating to the project's impact to the availability of community and social facilities</i></p>	<ul style="list-style-type: none"> • Preparation and implementation of Business Management and Assistance Strategy for Construction • Implementation of a Consultation Involvement Plan 	Slight Negative
<p>Disturbance to Amenity <i>Relating to the potential impacts to residential, commercial and community uses</i></p>	<p>Preparation and implementation of:</p> <ul style="list-style-type: none"> – Framework Construction Traffic Management – Framework Construction Environmental Management – Construction Method Statements Implementation of a Consultation Involvement Plan • Maintain Place Managers and provide a 24 hour toll free number 	Slight Negative
<p>Visual Amenity & Land Use</p>	<ul style="list-style-type: none"> • Preparation and implementation of Business 	Slight Negative



POTENTIAL SOCIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
Integration <i>Relating to the impact to the integrity and quality of the local built and natural environment</i>	Management Strategy for Construction <ul style="list-style-type: none"> • Implementation of a Consultation Involvement Plan • Maintain Place Managers and provide a 24 hour toll free number 	
The Perception of Safety & Security <i>Relating to the impact of the project to the perceived safety and security of the environment surrounding stations and work sites</i>	<ul style="list-style-type: none"> • Preparation and implementation of a Framework Construction Environmental Management and Construction Method Statements that incorporate appropriate site security and safety measures • Implementation of a Consultation Involvement Plan • Maintain Place Managers and provide a 24 hour toll free number 	Slight Negative
Employment & Education <i>Relating to the social benefits of the project with respect to direct employment generation and access to employment and education facilities</i>	Preparation and implementation of: <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management 	Neutral
Health and Well Being <i>Relating to the ability of public transport to increase physical activity, improve travel times and accessibility to employment and education</i>	Preparation and implementation of: <ul style="list-style-type: none"> • Framework Construction Traffic Management • Framework Construction Environmental Management • Construction Method Statements 	Neutral
Air Quality <i>Relating to the impact of air quality to health</i>	Preparation and implementation of Construction Method Statements	Slight Negative

Table 14.4 Summary of Recommended Mitigation Measures During Operation – Social Impacts

POTENTIAL SOCIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
Accessibility & Travel Times <i>Relating to the ease of access and duration of travel for employees, residents and visitors to various destinations</i>	Impact may be enhanced through station master planning process and careful integration of station design with local environment to ensure attractive, safe and convenient access to stations.	Moderate Positive
Disturbance to Amenity <i>Relating to the potential impacts to residential, commercial and community uses</i>	<ul style="list-style-type: none"> • Rolling stock and equipment maintenance program to minimise noise and disturbances from operation • Implement and maintain necessary mitigation measures i.e. acoustic walls 	Neutral
The Perception of Safety & Security <i>Relating to the impact of the project to the perceived safety and security of the environment surrounding stations and work sites</i>	<ul style="list-style-type: none"> • Ensure stations are designed in accordance with the NSW Police Crime Prevention through Environmental Design Strategy and Design Review Panel recommendations 	Neutral

POTENTIAL SOCIAL IMPACT DESCRIPTION	RECOMMENDED MITIGATION	IMPACT POST MITIGATION
<p>Health and Well Being <i>Relating to the ability of public transport to increase physical activity, improve travel times and accessibility to employment and education</i></p>	<ul style="list-style-type: none"> • Implement Station Master Plans (approved in accordance with Design Review Panels) to provide attractive, accessible and integrated station locations that encourage people to walk • Ensure stations are designed in accordance with the NSW Police Crime Prevention through Environmental Design Strategy 	<p>Slight Positive</p>



15 Conclusion

Overall this specialist study has found that the CBD Metro Project would result in a range of positive and negative economic and social impacts. The impacts would however vary in their distribution across different project phases, geographic areas, business and social groups.

The CBD Metro would support capacity improvements to Sydney's existing transport network, increasing the scale of the workforce that can access Sydney CBD using sustainable travel options. These benefits would have positive wider economic merits including enhanced opportunities for business agglomeration, economic innovation and productivity, as well as a reduction in the level of road based congestion. Wider economic impacts would also relate to the generation of economic multipliers on account of investment in a major new form of public infrastructure, and the resulting direct and indirect generation of employment from construction.

In the short term, not all the economic impacts of the project would be positive. The construction of the CBD Metro would temporarily negatively affect the day to day operation of numerous businesses located within the station radii, project corridor and suburbs through which it would pass. These impacts would range from the acquisition and/or relocation of businesses, to construction related disturbances. Likely impacts to businesses would include: noise, dust and vibration, disruptions to traffic and pedestrian movements, customer access, changes to passing trade, business servicing facilities and travel times.

The scope and significance of the project's social impacts would vary. For the most part, during construction, impacts to the Study Area's sensitive receivers would be moderate negative, whilst upon operation the majority of impacts would be positive.

During the construction phase the negative impacts of the project would primarily relate to increases in the level of noise, vibration and traffic congestion. These disturbances are likely to affect daily activities such as travel to work, business operation and the use of some public spaces in the station radii in addition to the availability of some community and cultural services.

During the operational phase, a variety of social benefits would result from the CBD Metro owing to the associated improvements in travel speed, reliability, accessibility and connectivity. Benefits include better access to employment and education opportunities, social and community services, and cultural activities. Other benefits relate to reduced traffic congestion, increased opportunities for physical activity and social interaction, and improvements to the quality and character of the urban environment.

Through the use of appropriate forms of mitigation and management, the negative impacts of the project could be addressed to an acceptable level. The implementation and ongoing monitoring of these impacts, coupled with Sydney Metro's project commitments, would combine to create a project that would support many of Sydney's social and economic objectives.



16 References

- Access Economics, Business Outlook Report – First Quarter 2009 (April 2009)
- Australian Transport Compact: Advancing the Nation's Passenger Transport Priorities – Tourism and Transport Forum (TTF) Australia (2008)
- Australian Bureau of Statistics: Persons Not in The Labour Force Catalogue 6220.0 (September 2008)
- Bajic, V. (1983). "The Effects of a New Subway Line on Housing Prices in Metropolitan Toronto." *Urban Studies* 20(147-158)
- Budget 2009/2010: Nation Building for the Future – www.budget.gov.au (May 2009)
- Carroll, T. M., T. M. Clauretie, et al. (1996). "Living next to Godliness: Residential Property Values and Churches." *Journal of Real Estate Finance and Economics*
- City of Sydney: Population and Household Forecasts for Pyrmont (October 2008) – <http://www.id.com.au/sydney/forecasted>
- Corpuz, G., et al. (2005). "Walking for Transport and Health: Trends in Sydney in the Last Decade" – 28th Australasian Transport Research Forum
- Creating Healthy Environments: Review of Links Between the Physical Environment, Physical Activity and Obesity – NSW Centre for Overweight and Obesity (COO) (2005)
- Debrezion, G., Pels, E. & Rietveld, P. 2007, 'The Impact of Railway Stations on Residential and Commercial Property Value: A Meta-Analysis' *Journal of Real Estate Finance and Economics*, vol. 35, no. 2, pg 161-180.
- Department of Transport (United Kingdom): Crime and Disorder on Public Transport - <http://www.dft.gov.uk/pgr/crime/> (2009)
- Director General's Requirements, NSW Department of Planning (Letter Dated 27 February 2009)
- Estimating Urban Traffic and Congestion Cost Trends for Australian Cities (Working Paper No.71) – Department of Infrastructure, Transport, Regional Development and Local Government (June 2007)
- Guidelines for Major Projects Community Consultation – NSW Department of Planning (October 2007)
- Health Impacts of Transport Emissions in Australia: Economic Costs (Working Paper 63) – Bureau of Transport and Regional Economics (June 2005)
- Infrastructure to 2030: Mapping Policy for Electricity, Water and Transport - Strategic Issues for the Future Funding and Operation of Urban Public Transport Systems – Organisation for Economic Cooperation & Development (OECD) (2007)
- McMillen, D.P. & McDonald, J. 2004, 'Reaction of House Prices to a New Rapid Transit Line: Chicago's Midway Line 1983 – 1999' *Real Estate Economics*, vol. 32, no. 3, pg 463 – 487
- NSW Government: Tourism New South Wales – www.corporate.tourism.nsw.gov.au (2009)
- New South Wales State Plan: A New Direction for NSW – NSW Government (November 2006)



Research Paper: Tourism's Contribution to the Australia Economy 1997 / 98 - 2005 / 06 – Tourism Research Australia (2007)

Rosenthal, S and Strange, W (2004) 'Evidence of the Nature of the Sources of Agglomeration Economies' Handbook of Urban and Regional Economic

Social Detriments of Health: The Solid Facts (2nd Ed.) – World Health Organisation (WHO) Europe (2003)

Social Profile Report: Sydney Local Government Area – NSW Office of Liquor Gaming & Racing (OLGR) (February 2009)

State Infrastructure Strategy 2008-2018 – New South Wales Treasury (2008)

Sustainable Sydney 2030 – City of Sydney Council (2008)

Sydney Metropolitan Strategy - City of Cities: A Plan for Sydney's Future – NSW Department of Planning (2005)

The Auditor-General's Report to Parliament: Volume 4, 2007 – The Audit Office of NSW (2007)

The Inner West Subregion Draft Subregional Strategy – NSW Department of Planning (2008)

The Sydney City Subregion Draft Subregional Strategy – NSW Department of Planning (2008)

TransFigures: Car Travel in Sydney, Changes in the Last Decade – Transport Data Centre (TDC), Department of Infrastructure and Natural Resources (March 2005)

TransFigures: Employment and Commuting in Sydney's Centres 1996-2006 – Transport Data Centre (TDC), NSW Department of Planning (December 2008)

TransFigures: Trip Flows into Sydney and Other Regional Cities – Transport Data Centre (TDC), NSW Department of Planning (March 2006)

Travel by Australians, Quarterly Reports: December 2008 – Tourism Research Australia (2008)

Travel to Sydney: Year to December 2008 – Tourism New South Wales (2008)

TRB Special Report 282: Does the Built Environment Influence Physical Activity? Examining the Evidence – Transportation Research Board (TRB) USA (2005)

Tse, R. Y. C., Y. C. Lee, et al. (1997). "Effects of Railway on House Prices in Hong Kong." Australian Land Economics Review 3(1): 33-35

Urban Air Pollution from Motor Vehicles: Australian Trends to 2020 – Bureau of Transport and Regional Economics (2003)

Voss, G. (1995). "Public Infrastructure and Private Production." University of NSW



Appendix A Demographic Profile



Existing Demographic Characteristics of Residents

The following demographic profile has been prepared to assess the existing characteristics of the resident population located within the Study Area.

The profile has been based on a review of 2006 and 2001 ABS Census Data. Where possible, a comparison has also been made with the 1996 Census Data results. Owing to changes in census categories and collection districts over the census years, a direct comparison has not always been possible.

The analysis found that as of the 2006 Census, the LGAs of Leichhardt and Sydney has a resident population of over 205,000 people. This represents close to 5% of the population of the Sydney Statistical Division (SD). The suburbs influenced by the project (Sydney, Haymarket, Chippendale, Pyrmont and Rozelle) had a resident population of 63,000 people or 31% of the total population for the two LGAs.

City of Sydney LGA

The number of residents within the City of Sydney LGA grew significantly over the past census period from 37,555 (as of the 2001 Census) to 156,571 as of 2006. This phenomenal increase is largely a result of the LGA's amalgamation with the South Sydney LGA and parts of Leichhardt LGA (Glebe and Forest Lodge) during this period. Notwithstanding this, the LGA experienced significant population growth in its own right as a result of more people moving to Sydney CBD and the inner city areas for work, education or lifestyle reasons.

Between 2001 and 2006, based on ABS Census data analysis, the area now known as the City of Sydney LGA experienced a net increase of 32,000 residents. This represents a 25.7% increase over the census period or a growth rate of 4.7% per annum, the most significant residential growth of any other LGA in NSW between 2001 and 2006⁴³.

Sydney LGA's resident population (as of the 2006 Census) was characterised by a sizeable cohort of residents within the 15 to 29 and 30 to 44 year age bands. This age band highlights the attraction of inner city living to younger residents seeking proximity to their place of work, educational institutions, and the cultural and entertainment attractions of the City.

The proportion of children under the age of 15 years and residents over the age of 45 years (when compared to the Sydney SD) was as a result correspondingly low. As of the 2006, census residents within the City of Sydney LGA were predominantly couples without children (60%), living in units and townhouses (93%) that were rented (61%).

These characteristics show a shift change in the composition of households in the LGA from only the last census period. As of 2001 the proportion of couples without children residing in the Sydney LGA was lower at 48%, the proportion of residents living in units compared to townhouses was higher whilst the proportion of residents born in Australia or Oceania was lower at 27% (compared to 44% in 2006).

This demographic profile reflects the LGA's role as a major centre for employment and the attraction of inner city living for younger professionals. Owing to this demographic there is a greater proportion of Sydney LGA residents (compared to the Sydney SD and NSW) employed as Managers or Professionals (50%) and earning over \$2,500 per week.

⁴³ Sustainable Sydney 2030 – City of Sydney

Contrastingly, there is a high proportion of residents earning under \$350 per week. This characteristic may represent pockets of deprivation, social housing, and student housing, indicating the range of social groups residing within inner city areas.

The significant proportion of residents within lower income groups may be reflective of the ongoing importance of the CBD and inner city areas as a destination for new migrants to Australia as well as overseas students attracted to the numerous tertiary educational institutions provided within the area and associated student housing.

From another perspective, when compared to the Sydney SD and NSW, Sydney City LGA also has a greater share of residents born overseas (56% compared to 37% and 29% respectively). Accordingly the Sustainable Sydney 2030 Strategy identifies the LGA as one of the most demographically diverse LGAs in Sydney⁴⁴.

Leichhardt LGA

As of 2006, Leichhardt LGA had a population of 48,776 residents. When comparing the 2006 Census population estimate to the 2001 Census estimate, at first glance it would appear that the number of residents declined in the LGA from 61,101 in 2001. The significant difference however is a direct result of the change in LGA borders between the census periods where Glebe and Forest Lodge were incorporated into the City of Sydney LGA.

Similar to the City of Sydney, Leichhardt LGA had a comparatively lower proportion of residents under the age of 14 years and also had a lower proportion of residents aged 15 - 29 years when compared to the Sydney SD. The bulk of Leichhardt's LGA was within the 30 – 44 year, 45 - 59 year and 60 - 74 year age brackets representing a more established population than the City of Sydney LGA.

These characteristics may be reflective of Leichhardt LGAs close proximity to the CBD and accordingly the greater number of professionals within working age groups. It may also represent the greater propensity of residents towards home ownership (56% compared to the Sydney LGA of 35%) and therefore the lower proportion of residents under the age of 30 years.

In keeping with the established professional resident population, Leichhardt LGA had a greater proportion of residents born in Australia (37%) than both the City of Sydney LGA and the Sydney SD. It also had a higher proportion of families without children (46%) than the Sydney SD yet a greater proportion of households with children than the City of Sydney LGA (61%). The greater share of family households is related to the predominant type of dwellings in the LGA. 34.7% of residents live within a separate house, whilst 36.7% reside within a townhouse or flat / unit.

The LGA's geographic proximity to the CBD is reflected in the high proportion of residents employed as Managers or Professionals (50%), the comparatively low-level of unemployment (3%) and the significant proportion of residents in the highest income bracket (32% of households earned over \$2,500 per week). It is important to note however, that despite the general affluence of the LGA, 11% of households continue to earn under \$349 per week.

Chippendale

As of 2006, Chippendale had a resident population of 4,066 people representing an increase of 23% from 2001. In 2006, the overwhelming majority (48%) of Chippendale residents were within the 15 - 29 year age bracket. Culturally diverse, the suburb has over 68% of its residents born outside of Australia and Oceania. Reflecting its inner city location Chippendale has:

⁴⁴ Sustainable Sydney 2030, (2008) City of Sydney Council



- 67% of residents rented their homes (up from 58% in 2001);
- 38% of homes were occupied by lone person households (slight decrease from 39% in 2001);
- 71% of families had no children (up from 64% in 2001); and
- 74% of households lived in flats/units and 23% lived in townhouses (consistent with 2001).

With respect to employment characteristics, the greatest share of residents were employed as Managers and Professionals. A noteworthy share were also employed as Clerical and Administrative Workers (14%); Community and Personal Service Workers (8%) and Sales Workers (9%). Despite the proximity of the Suburb to Sydney CBD, unemployment levels were comparatively high at 7%.

Chippendale was characterised by a high proportion (20%) of households earning under \$349 per week, compared to the Sydney SD (12.8%) and NSW (14.9%), and a greater share of households in the over \$2,500 per week bracket as of 2006.

Haymarket

As of 2006, Haymarket had a resident population of 4,312 people representing a decline in residents from 5,091 in 2001. Despite the actual decline in the number of residents, over the census period the number of dwellings in Haymarket increased from 1,435 to 1,554. This contradicting change reflects the trend for a decline in average household sizes and an increasing number of households without children in the suburb. Notwithstanding this trend, Haymarket still represented the suburb within the Study Area with the highest average household size (i.e. 2.8 persons per household).

The overwhelming majority of Haymarket residents (67%) were within the 15 - 29 year age bracket. Haymarket is also characterised by a high proportion of residents born outside of Australia or Oceania (90%). A noticeably high proportion of these residents were born in Asia (over 27%). This characteristic reflects the suburbs proximity to Chinatown and its association with this cultural community.

Reflecting its inner city location and proximity to tertiary education institutions such as the University of Technology Sydney, in 2006 (comparative to the Sydney SD and NSW) Haymarket had:

- 66% of residents rented their homes (up from 45% in 2001);
- 33% of homes were occupied by group (i.e. student) households (up from 23% in 2001);
- 47% of families had no children (32% in 2001); and
- 77% of households lived in flats/units (down from 97% in 2001).

Of all suburbs profiled by this assessment, Haymarket had the lowest proportion of residents employed as Managers or Professionals (26%). It had a greater share of Community and Personal Service Workers (13%) and Labour Workers (13%) than the Sydney SD and a high unemployment rate of 11%. These characteristics are a likely reflection of the high concentration of migrants and students residing within the suburb with a greater propensity to part time / casual labour related employment.

Sydney Suburb

As of 2006, 13,547 people resided in the suburb of Sydney. Owing to suburb boundary changes between 2001 and 2006 it is not possible to quantify the change in the number of residents in the suburb over the census period.



As of 2006 the greatest share (49%) of Sydney Suburb residents were within the 15 - 29 year age bracket forming a median age of only 28 years compared to 35 years for the Sydney SD. The profile characteristics show a newly established, young, professional demographic living in a higher density environment with:

- 83% of residents being born outside of Australia or Oceania (up from 71% in 2001);
- 64% of dwellings being rented (up from 56% in 2001);
- 57% of families had no children (up from 52% in 2001); and
- 88% of residents living in units / flats (consistent with 2001).

Whilst the majority of residents living in the suburb of Sydney as of 2006 were employed either as a Manager or Professional (41%) significant proportions were also employed as Community and Personal Service Workers (10%), Clerical and Administrative Workers (12%) and Sales Workers (10%). The suburb also had a high rate of unemployment (8% compared to the Sydney SD of 5.3%).

This diversity of employment types was also evident when reviewing household incomes. The greatest share of households either fell within the below \$349 per week household income bracket or the \$2,500 and above bracket. This range of household incomes indicates the importance of access to Sydney CBD for not only professional and managerial occupations but also lower wage earners such as service workers, students, shift workers or unemployed persons seeking employment opportunities.

Pymont

As of 2006, Pymont had a resident population of 11,088 representing a 41% population increase from the 2001 Census. In 2006, the suburb had a strong concentration of young adults' in the 15 - 29 year age bracket (40%) followed by the 30 - 44 year bracket (33%). Compared to 2001 these characteristics show a maturing of the population with a decrease in the proportion of 15 - 29 year olds and an increase in the 30 - 44 year age bracket.

Despite this, population forecasts anticipate that the suburb will continue to have a strong attraction for young adults moving to the area to replace existing residents looking to establish family households elsewhere. By 2021, it is anticipated that the suburb will have a resident population closer to 12,700 persons⁴⁵.

In keeping with other inner city suburbs, Pymont had a low proportion of residents under the age of 15 years (8%) compared to the Sydney SD (19.5%). It also had a very low share of residents over the age of 60 years (4%) compared to 16.7% for the Sydney SD. The proportion of residents in these age brackets has declined since 2001 indicating the predominance of young adults and middle age people living in the suburb owing to its proximity to employment, education and entertainment opportunities.

Pymont residents have a diverse social and cultural background. Reflecting its inner city location the suburb has:

- 62% of homes were rented (up from 56% in 2001);
- 30% of homes were occupied by lone persons and 15% were group (i.e. student) households;
- 63% of families had no children (up from 51% in 2001); and
- 94% of residents living in units / flats (up from 83% in 2001).

⁴⁵ City of Sydney (id) Pymont, Population and Household Forecasts July 2007



Close to half of all residents (47%) were employed as Managers and Professionals reflecting the majority population share (53%) within the over \$1,400 per week household income bracket (Sydney SD 37%) and the comparatively lower proportion of households below this band.

Notwithstanding the predominance of these occupations, the suburb also had a high proportion of residents in 2006 employed in the hospitality industry and / or undertaking tertiary studies.

Rozelle

As of 2006 Rozelle had a resident population of 6,873 reflecting a negligible increase of only 79 residents from 2001. Compared to the other suburbs discussed above, as of 2006, Rozelle had a greater share of residents under the age of 14 years (14%) however this proportion was still significantly lower than Sydney SD (19.5%). The majority of Rozelle's resident population are between the ages of 15 and 59 years (80%) and were born within Australia (65%), reflecting a more established suburb.

Whilst home ownership rates were significantly higher in Rozelle than the other suburbs profiled, the proportion was still 8% lower than the Sydney SD. The proportion of family households was also noticeably lower as well as couples with children. The majority of dwellings in the suburb were townhouses (35%) with a close to equal share of separate dwellings and flats / units. There was an increase of 10 basis points in the share of flat / units in the suburb since 2001 from 25%.

The overwhelming majority of residents in 2006 were employed as either Professionals or Managers (61%) with low rates of unemployment (3%). These features were reflected in the significant proportion of households earning over \$1400 per week (61%) and over \$2,500 per week (39%).

Demographic Tables

A detailed profile of demographic characteristics for each selected suburb and the LGA has been provided below.

The tables have been broken into three categories being:

1. Population and age;
2. Dwelling and household type; and
3. Employment and income.

The tables have been provided for the 2006 and 2001 census years. For comparative purposes the same details for the Sydney SD and NSW have also been provided.



Table A.1 Profile of Population and Ages for selected suburbs and LGA's as of 2006 Census

	Sydney Suburb	Rozelle	Balmain	Chippendale	Haymarket	Pymont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Population and Dwellings											
Total Population	13,547	6,873	9,403	4,066	4,312	11,088	5,550	48,776	156,571	4,119,190	6,549,177
Total Dwellings	6,883	3,438	4,851	2,060	1,554	5,874	3,102	24,060	86,112	1,643,675	2,728,719
Occupied Private Dwellings	6,164	3,172	4,463	1,994	1,518	5,565	2,953	21,994	78,801	1,521,465	2,470,451
Occupied Private Dwellings (%)	90%	92%	92%	97%	98%	95%	95%	91%	92%	93%	91%
Average Household Size	2.1	2.2	2.1	1.9	2.8	2.0	2.0	2.2	1.9	2.7	2.6
Age Distribution											
0-14	6%	14%	15%	6%	5%	8%	6%	14%	7%	19.5%	19.8%
15-29	49%	20%	20%	48%	67%	40%	53%	19%	34%	21.2%	19.8%
30-44	22%	40%	36%	29%	19%	33%	25%	33%	31%	23.2%	21.8%
45-59	14%	20%	22%	14%	8%	15%	11%	20%	16%	19.3%	19.9%
60-74	7%	4%	5%	2%	1%	3%	3%	10%	8%	10.6%	12.0%
75+	3%	2%	2%	1%	1%	1%	1%	4%	4%	6.1%	6.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
Median Age	28	35	36	29	26	31	28	36	32	35	37
Place of Birth											
Australia & Oceania	17%	65%	66%	32%	9%	37%	24%	67%	44%	63.1%	71.2%
Europe	4%	15%	16%	4%	2%	9%	4%	14%	8%	8.9%	7.8%
North Africa and Middle East	0%	0%	0%	0%	0%	0%	0%	0%	1%	2.5%	1.6%
Asia	33%	4%	3%	19%	60%	18%	32%	4%	14%	10.6%	7.1%
Americas	1%	1%	2%	1%	0%	1%	1%	1%	1%	0.6%	0.5%
Sub-Saharan Africa	0%	0%	1%	0%	0%	0%	0%	1%	0%	0.7%	0.5%
Other	44%	13%	12%	43%	29%	34%	38%	13%	31%	13.7%	11.4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%

Source: ABS 2006



Table A.2 Profile of Dwelling and Household Types for selected suburbs and LGA's as of 2006

	Sydney Suburb	Rozelle	Balmain	Chippendale	Haymarket	Pymont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Home Ownership											
Owned or Being Purchased	31%	57%	53%	28%	29%	36%	26%	56%	35%	65.0%	66.7%
Rented	64%	42%	44%	67%	66%	62%	70%	41%	61%	31.3%	29.5%
Other/Not Stated	5%	2%	2%	5%	5%	2%	4%	2%	4%	3.7%	3.8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
Household Structure											
Family Households	47%	62%	58%	42%	48%	55%	42%	61%	45%	72.7%	72.1%
Lone Person Households	35%	29%	34%	38%	19%	30%	39%	31%	41%	23.1%	24.2%
Group Households	18%	9%	8%	20%	33%	15%	19%	8%	14%	4.2%	3.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
Family Type											
Couple family w. children	18%	35%	36%	12%	21%	21%	21%	38%	22%	49.3%	46.2%
Couple family w/o children	57%	52%	48%	71%	47%	63%	57%	46%	60%	33.2%	36.0%
One parent family	10%	11%	13%	7%	10%	10%	12%	13%	12%	15.6%	16.1%
Other family	15%	2%	3%	9%	22%	6%	10%	3%	6%	1.9%	1.7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
Dwelling Type											
Separate house	4%	31%	29%	1%	13%	0%	0%	35%	5%	63.6%	71.4%
Townhouse	6%	35%	39%	23%	6%	5%	13%	37%	22%	11.8%	9.7%
Flat-Unit-Apartment	88%	32%	30%	74%	77%	94%	87%	26%	71%	23.9%	17.7%
Other dwelling	2%	2%	2%	2%	2%	0%	0%	1%	1%	0.6%	1.1%
Not stated	1%	0%	0%	0%	2%	0%	0%	0%	0%	0.1%	0.1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%

Source: ABS 2006



Table A.3 Profile of Employment and Income for selected suburbs and LGA's as of 2006

	Sydney Suburb	Rozelle	Balmain	Chippendale	Haymarket	Pymont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Labour Force											
Managers	14%	22%	22%	12%	8%	19%	10%	19%	15%	12.5%	12.8%
Professionals	27%	39%	41%	35%	18%	34%	30%	39%	35%	22.5%	19.9%
Community & Personal Services Workers	10%	6%	6%	8%	13%	8%	9%	6%	9%	7.6%	8.1%
Clerical and Administrative Workers	12%	13%	12%	14%	12%	15%	14%	13%	13%	15.8%	14.5%
Sales Workers	10%	6%	6%	9%	13%	7%	10%	7%	8%	9.0%	9.1%
Technicians & Trade Workers	7%	6%	6%	6%	8%	6%	8%	7%	7%	12.0%	12.8%
Machinery Operators & Drivers	1%	1%	1%	2%	1%	1%	2%	2%	2%	5.7%	6.1%
Labourers & Related Workers	8%	2%	2%	4%	13%	3%	5%	3%	4%	7.6%	9.0%
Inadequately described or N.S.	3%	2%	2%	1%	3%	2%	2%	1%	2%	2.0%	1.8%
Unemployed	8%	3%	3%	7%	11%	4%	9%	3%	5%	5.3%	5.9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
Weekly Household Income											
\$0-\$349	22%	7%	11%	20%	26%	9%	9%	11%	17%	12.8%	14.9%
\$400-\$799	13%	9%	10%	14%	16%	11%	11%	11%	13%	17.9%	21.2%
\$800-\$1,399	19%	14%	13%	20%	23%	17%	17%	15%	18%	20.8%	21.5%
\$1,400-\$2,499	15%	22%	18%	21%	14%	22%	22%	21%	20%	21.2%	19.1%
\$2,500+	21%	39%	37%	15%	9%	31%	31%	32%	22%	16.0%	12.0%
Partial income stated	7%	8%	9%	7%	9%	9%	9%	8%	7%	8.6%	8.3%
All incomes not stated	2%	1%	2%	2%	2%	1%	1%	2%	2%	2.7%	2.9%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100.0%	100.0%
<i>Median Weekly Household Income</i>	\$1,078	\$2,070	\$1,876.0	\$1,110	\$ 844	\$1,736	\$ 938	\$1,733	\$ 1,204	\$1,154	\$1,036

Source: ABS 2006



Table A.4 Profile of Population and Ages for selected suburbs and LGA's as of 2001

	Sydney Suburb	Rozelle	Balmain	Chippendale	Haymarket	Pymont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Population and Dwellings											
Total Population	10,735	6,794	9,010	3,299	5,091	7,861	4,054	61,101	37,555	3,948,015	6,311,168
Total Dwellings	4,099	3,519	4,655	1,793	1,435	4,542	1,842	21,914	16,145	1,546,691	2,571,540
Occupied Private Dwellings	3,265	3,137	4,312	1,581	1,365	3,896	1,731	8,417	14,125	1,438,394	2,343,677
Occupied Private Dwellings (%)	79.7%	89.1%	92.6%	88.2%	95.1%	85.8%	94.0%	38.4%	87.5%	93.0%	91.1%
Age Distribution											
0-14	8%	13%	12%	5%	10%	10%	10%	10%	10%	10%	21%
15-29	23%	25%	22%	44%	42%	42%	43%	43%	43%	43%	20%
30-44	31%	33%	32%	29%	22%	22%	24%	24%	24%	24%	23%
45-59	24%	19%	21%	14%	15%	15%	13%	13%	13%	13%	19%
60-74	11%	7%	10%	5%	8%	8%	7%	7%	7%	7%	11%
75+	4%	3%	4%	2%	3%	3%	3%	3%	3%	3%	6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Place of Birth											
Australia & Oceania	29%	70%	69%	47%	10%	44%	35%	70%	27%	70%	73%
Europe	6%	15%	16%	7%	3%	11%	6%	14%	6%	10%	10%
North Africa and Middle East	0%	0%	0%	0%	0%	1%	0%	1%	0%	2%	2%
Asia	4%	3%	2%	12%	27%	17%	28%	4%	15%	8%	7%
Americas	1%	2%	2%	1%	0%	1%	1%	1%	1%	1%	1%
Sub-Saharan Africa	0%	0%	1%	0%	0%	1%	0%	0%	0%	1%	1%
Other/Not Stated	59%	10%	10%	32%	60%	26%	30%	10%	50%	8%	6%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: ABS 2001



Table A.5 Profile of Dwelling and Household Types for selected suburbs and LGA's as of 2001

	Sydney suburb	Rozelle	Balmain	Chippendale	Haymarket	Pymont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Home Ownership											
Owned or Being Purchased	20%	52%	49%	24%	22%	22%	23%	47%	21%	62%	64%
Rented	56%	39%	43%	58%	45%	56%	52%	44%	51%	29%	28%
Other/Not Stated	24%	9%	9%	19%	33%	22%	25%	9%	28%	8%	8%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Household Structure											
Family Households	43%	60%	56%	40%	54%	53%	51%	57%	49%	73%	73%
Lone Person Households	50%	30%	35%	39%	23%	30%	32%	33%	36%	22%	23%
Group Households	7%	11%	8%	22%	23%	17%	18%	10%	15%	4%	4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Family Type											
Couple with children	26%	46%	45%	17%	29%	28%	34%	46%	27%	65%	48%
Couple no children	52%	41%	40%	64%	32%	51%	42%	36%	48%	21%	35%
One parent family	16%	11%	13%	10%	13%	13%	15%	15%	13%	13%	15%
Other family	6%	2%	2%	9%	26%	9%	9%	3%	12%	1%	2%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Dwelling Type											
Separate house	0%	34%	25%	1%	0%	0%	1%	30%	0%	63%	70%
Townhouse	7%	39%	41%	22%	0%	7%	15%	38%	6%	11%	9%
Flat-Unit-Apartment	88%	25%	31%	74%	97%	90%	83%	30%	91%	24%	18%
Other dwelling	3%	1%	2%	3%	1%	0%	0%	1%	1%	1%	2%
Not stated	1%	1%	1%	0%	2%	2%	1%	1%	2%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: ABS 2001



Table A.6 Profile of Employment and Income for selected suburbs and LGA's as of 2001

	Sydney Suburb	Rozelle	Balmain	Chippendale	Haymarket	Pyrmont	Ultimo	Leichhardt LGA	Sydney LGA	Sydney SD	NSW
Labour Force											
Managers and Administrators	23%	16%	18%	9%	9%	12%	9%	14%	16%	8%	9%
Professionals	31%	33%	36%	32%	20%	29%	26%	34%	28%	20%	18%
Associate Professionals	16%	13%	13%	14%	13%	15%	11%	12%	14%	11%	11%
Tradespersons & Related Wrkrs	3%	5%	4%	5%	4%	4%	5%	6%	4%	10%	11%
Clerical, Sales and Service Wrkrs	18%	22%	20%	26%	34%	28%	31%	23%	25%	29%	28%
Production & Transport Wrkrs	1%	2%	2%	2%	2%	3%	3%	3%	2%	7%	7%
Labourers & Related Wrkrs	1%	2%	2%	3%	5%	2%	4%	3%	3%	6%	7%
Inadequately described or N.S.	2%	1%	1%	1%	3%	1%	2%	1%	2%	2%	2%
Unemployed	4%	4%	4%	8%	11%	6%	9%	5%	6%	6%	7%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Weekly Household Income											
\$0-\$299	11%	3%	5%	11%	17%	6%	8%	5%	10%	4%	12%
\$300-\$599	15%	10%	13%	13%	15%	10%	17%	15%	13%	19%	21%
\$600-\$999	11%	9%	9%	14%	13%	10%	13%	11%	12%	14%	19%
\$1,000-\$1,499	15%	17%	14%	18%	19%	17%	19%	16%	18%	17%	16%
\$1,500-\$1,999	3%	6%	4%	6%	5%	6%	7%	5%	5%	8%	11%
\$2,000+	21%	18%	19%	16%	12%	20%	16%	16%	18%	14%	10%
Partial income stated	17%	29%	29%	16%	10%	24%	13%	23%	18%	14%	8%
All incomes not stated	6%	7%	8%	6%	9%	7%	7%	7%	7%	9%	4%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: ABS 2001



Index of Disadvantage

Produced by the Australian Bureau of Statistics (ABS), the Socio-Economic Index for Areas (SEIFA) compares geographic areas (LGAs and derived suburbs) with respect to advantage and disadvantage. The SEIFA, Index of Socioeconomic Disadvantage (the 'Index') is derived from the attributes of an area's residents such as income, educational attainment, rate of unemployment and labour force skill.

Accordingly, the SEIFA shows where the affluent (as opposed to just high income earning) live; where disadvantaged (as opposed to the unemployed) live; and where the highly skilled and educated (as opposed to the tertiary educated people) live. The findings can be used to facilitate research into the relationship between socio-economic status and various health and educational outcomes, to determine areas that require funding and services and to identify new business opportunities.

The Index refers to the area in which a person lives, not to the socioeconomic situation of the particular individual. For the Index, every geographic area in Australia is given a SEIFA score which shows how disadvantaged that area is compared with other areas in Australia.

Higher scores on the Index occur when the particular geographic area has higher family incomes and a more skilled labour force. A higher score means that an area is more advantaged and accordingly a lower score indicates that an area is more disadvantaged.

Table A.7 illustrates examples of the ranking of local government areas in the Sydney SD. Of particular relevance to this assessment is the ranking of the City of Sydney and Leichhardt LGAs, which rank 20th and 30th respectively out of the 43 LGA's in the Sydney SD. This indicates that the LGAs are close to, or within the upper half of the index and therefore experience reasonable levels of advantage in the Sydney SD.

By way of example, the most disadvantaged LGA's in the Sydney SD are Fairfield and Auburn, while the least disadvantaged LGA's are Ku-ring-gai and Mosman.

Table A.7 SEIFA Index of Disadvantage – Sample of LGAs

Rank	LGA	2006 SEIFA Index of Disadvantage
1	Fairfield	876
2	Auburn	922
14	Penrith	1006
20	Sydney	1027
30	Leichhardt	1083
38	North Sydney	1114
42	Mosman	1130
43	Ku-ring-gai	1143

Source: Australian Bureau of Statistics 2006.

It is possible to break this analysis down into greater detail in order to gain a better understanding of how the influenced suburbs within the Study Area relate in terms of the Index of Disadvantage.

Table A.8 illustrates the ranking of suburbs along which the CBD Metro will traverse or directly serve. It shows that suburbs such as Haymarket (919), Ultimo (984) and Glebe (984) have lower levels of advantage than areas such as Pyrmont (1070) Balmain (1089) and Rozelle (1111).



For the purposes of context, examples of the more disadvantaged suburbs and their score in the Sydney SD include Fairfield (823) and Auburn (875). More advantaged examples include Mosman (1130) and Woollahra (1111).

Table A.8 SEIFA Index of Disadvantage by Suburb

Suburb Name	2006 SEIFA Index of Disadvantage
Haymarket	919
Ultimo	984
Glebe	984
Sydney (Suburb)	990
Chippendale	1028
Lilyfield	1042
Surry Hills	1051
Pymont	1070
Balmain	1089
Rozelle	1111

Source: Australian Bureau of Statistics 2006.

The index by suburb shows the comparative levels of disadvantage experienced by Haymarket in particular in addition to Ultimo and Glebe. Whilst these suburbs have a broad mix of social groups, the Index parameters lend towards lower levels of advantage owing to lower levels of job skills, and household incomes. Comparatively Pymont and Rozelle score high owing to the predominance of highly skilled people residing in these suburbs and their affluent households.



Appendix B Worker Origins and Destinations



Existing Worker Origins and Destinations

The Study Area is a major generator of employment in the Sydney Region. Accordingly a significant number of workers require fast and reliable access to the Study Area. Appendix B profiles the origin and destinations of employees and residents located within the Study Area. The journey to work profile has been based on 'Origin and Destination' data provided by the Ministry of Transport's Transport Data Centre (TDC).

Employee Origins

City of Sydney LGA

The largest share (13%) of persons employed in the City of Sydney LGA resides within the LGA. The remaining 311,506 employees commute to the City of Sydney for work purposes. Table B.1 also shows that 3% of people (11,473) commute from Leichhardt to the City of Sydney for work purposes.

Table B.1 Top 10 LGAs of Residence for Workers in the City of Sydney (2006)

Rank	Local Government Area	Number	Percent (%)
1	Sydney	46,272	13%
2	Randwick	19,643	6%
3	Sutherland Shire	16,745	5%
4	Marrickville	14,823	4%
5	North Sydney	12,978	4%
6	Waverley	11,679	3%
7	Hornsby	11,483	3%
8	Leichhardt	11,473	3%
9	Woollahra	11,069	3%
10	Canterbury	10,564	3%
	Other Areas	191,049	53%
	Total	357,778	100.0%

Source: TDC JTW 2006

Leichhardt LGA

Analysis of the TDC's data for Leichhardt LGA indicates that the largest share of its employees reside in Leichhardt LGA (28% or 4,994). The remaining 12,820 people employed by businesses within the LGA travel from a range of areas across Sydney SD including neighbouring Canada Bay (1,198 or 7%); Marrickville (1,129 or 6%) and the City of Sydney (1,039 or 6%).

Table B.2 Top 10 LGAs of Residence for Workers in Leichhardt LGA

Rank	Local Government Area	Total	Percent (%)
1	Leichhardt	4,994	28%
2	Canada Bay	1,188	7%
3	Marrickville	1,129	6%
4	City of Sydney	1,039	6%
5	Canterbury	812	5%

Rank	Local Government Area	Total	Percent (%)
6	Ashfield	735	4%
7	Ryde	632	4%
8	Bankstown	419	2%
9	Sutherland Shire	414	2%
10	Randwick	403	2%
	Other	6,049	34%
	Total	17,814	100%

Source: TDC JTW 2006

Worker Destinations

For employed persons living in the City of Sydney LGA, the main destination for employment is within the LGA boundaries. Leichhardt ranks in the top 10 work destinations for City of Sydney residents, with 1,041 City of Sydney residents travelling to work in Leichhardt LGA as at the 2006 Census.

Table B.3 Top 10 LGAs of Employment for Residents of the City of Sydney (2006)

Rank	Local Government Area	Number	Percent (%)
1	Sydney	46,272	59.7%
2	North Sydney	3,493	4.5%
3	Randwick	2,111	2.7%
4	Botany Bay	2,002	2.6%
5	Willoughby	1,883	2.4%
6	Woollahra	1,565	2.0%
7	Waverley	1,440	1.9%
8	Ryde	1,408	1.8%
9	Marrickville	1,171	1.5%
10	Leichhardt	1,041	1.3%
	Other Areas	15,072	19.5%
	Total	77,458	100.0%

Source: TDC JTW 2006

For residents of Leichhardt LGA, the main destination for employment is to the City of Sydney (11,482 people). Over 41% of employed residents commute from Leichhardt LGA to the City of Sydney.

Table B.4 provides a break down of those statistical local areas (SLAs) within the City of Sydney that residents are travelling to and from for work purposes. The results indicate 'Inner Sydney' (or the Sydney CBD) is the main work destination for employed Leichhardt residents, with over 7,475 or 65% of employed residents working in the City of Sydney.



Table B.4 Top 10 LGAs Leichhardt Residents are Travelling to for Work

Rank	Local Government Area	Number	Percent (%)
1	City of Sydney	11,482	41%
	<i>Sydney - Inner</i>	7,475	
	<i>Sydney - East</i>	1,210	
	<i>Sydney - South</i>	829	
	<i>Sydney - West</i>	1,968	
2	Leichhardt	4,994	18%
3	North Sydney (A)	1,325	5%
4	Ryde (C)	1,000	4%
5	Parramatta	731	3%
6	Willoughby (C)	687	2%
7	Marrickville (A)	611	2%
8	Canada Bay	544	2%
9	Woollahra (A)	482	2%
10	Randwick (C)	409	1%
	Other	5,974	21%
	Total	28,239	100%

Source: TDC JTW 2006

In light of the above analysis, over 12,500 residents commute between Leichhardt and the City of Sydney for work purposes. This significant movement of people emphasises the importance of fast, reliable and sustainable transport options between these destinations.

Travel Mode to Work

As identified above, a significant number of people travel to and from the Study Area for work purposes. The following section assesses by what modes workers are travelling to the Study Area in order to better understand modal preferences.

Figure B.2 shows the modal choice of workers employed within the LGAs of Leichhardt and Sydney (compared to the Sydney SD). It shows that for Leichhardt LGA, as of 2006 the greatest share of employees travelled to work by car as a driver and only 1% travelled by train and 3% by another method.

Across the City of Sydney LGA, the greatest share of employees travelled to work using the train as their only method of travel (25%). The second largest share related to travel by car as a driver (24%).

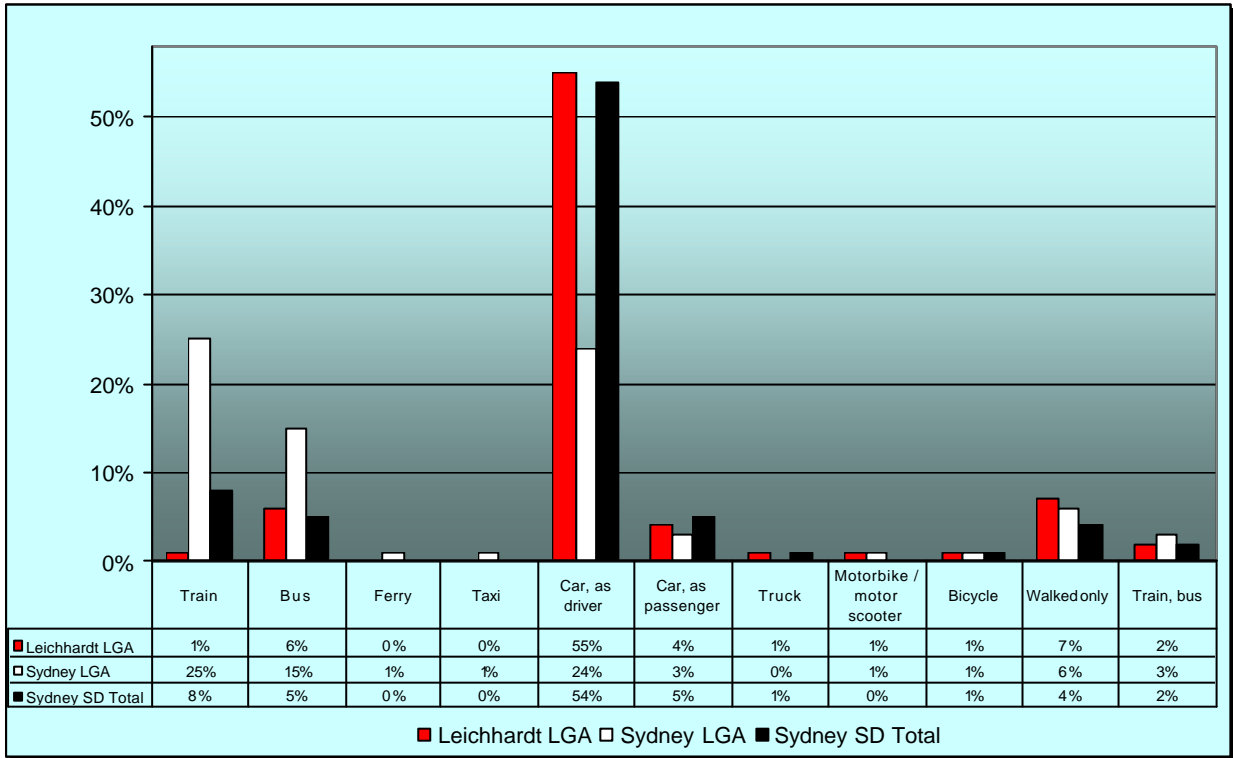
Of all centres in Sydney, the CBD had the greatest proportion of workers travelling to work by public transport. In fact, public transport in Sydney has almost twice the share (70%) of journeys to work than any other capital cities.⁴⁶ The majority of train travellers initiate their journeys along the main train networks such as the Western Line, particularly after the interchange with the northern line.⁴⁷ This

⁴⁶ State Infrastructure Strategy pg.38

⁴⁷ Transport Data Centre, Transfigures March 2006: Trip Flows into Sydney and Other Regional Cities

finding contrasts significantly to the average for the Sydney SD where in 2006 only 8% of workers travelled to work by train and 5% by bus. This characteristic shows that for Sydney CBD workers there is an established preference for using public transport for travel to work. As the population of Sydney CBD grows, demand for public transport will also grow placing greater pressure on existing public transport services.

Figure B.2 Modal Choice for Employees of Leichhardt LGA, Sydney LGA and Sydney SD

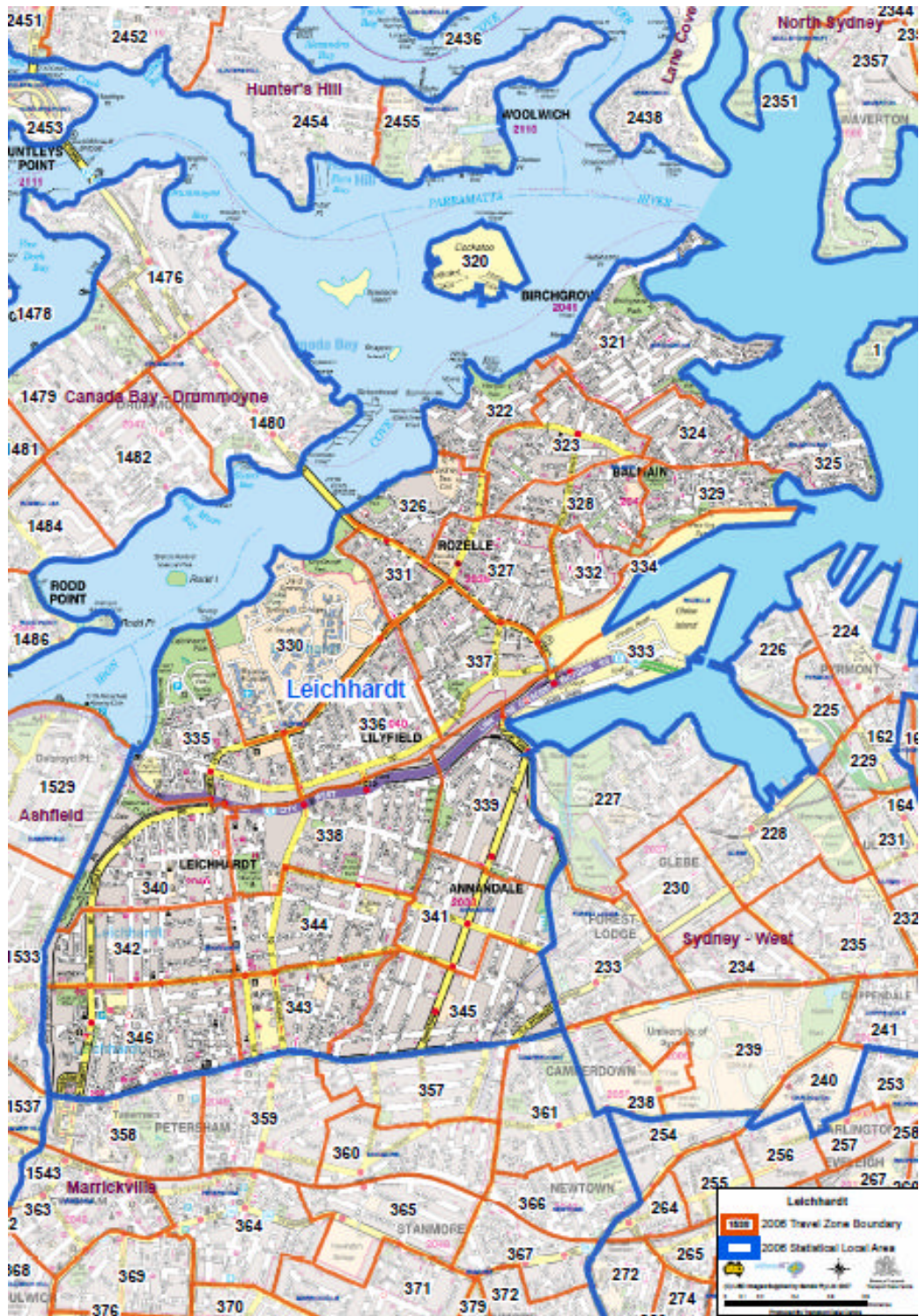


Source: TDC Statistics by Local Government Area 2006



Appendix C Travel Zone & SLA Boundaries for Leichhardt and Inner Sydney





Appendix D Social and Economic Workshop Invitees



Community Representatives

The following community organisations and interest groups were invited to attend the consultation workshops.

- Art Gallery of NSW
- Australian Museum
- Balmain Leagues Club
- Balmain Precinct Group
- Callan Park Bush Care
- CFO Powerhouse Museum
- CityRAGs
- Climate Change Balmain Rozelle
- Climate Change Balmain Rozelle
- Council of Ultimo/Pymont Associations
- Customs House Library
- Darling Street Anglican Church (St Thomas)
- East Sydney Neighbourhood Association
- Fort Street Public School
- Friends of Callan Park
- Friends of King George Park
- Harris Community Centre Multicultural Playgroup
- Heritage Group of Leichhardt District
- Home Library Service
- Hyde Park Community Voice
- Inner city child care centre
- International Grammar School
- King George V Children's program
- King George V Recreation Centre, The Rocks
- Ku Lance Child care centre
- KU Ultimo child care centre
- Presbyterian Church
- Probus Club of Balmain
- Pymont Action
- Pymont Children's program
- Pymont Community Centre
- Pymont Community Group
- Pymont Library Link
- Pymont Playgroup
- Pymont Progress Incorporated
- Pymont Youth Centre
- Rozelle Child Care Centre
- Rozelle Neighbourhood Centre
- Rozelle Public School
- Rozelle/Iron Cove Precinct Group
- Rozelle/Lilyfield Precinct Group
- Rozelle/White Bay Precinct Group
- SDN – Pymont early learning centre
- St Andrews Cathedral School
- St Mary's Cathedral College
- St Thomas Child Care
- St Thomas Rozelle Child Care Centre
- Sydney Secondary College Balmain Campus
- The Friends of Pymont Point Inc
- Town Hall Library Link
- Ultimo Community Centre
- Ultimo Library



- Magic Pudding child care centre
- Manager Sydney Observatory
- PCYC Balmain
- PCYC City of Sydney
- Pine Street Creative Arts Centre
- Powerhouse Museum
- Ultimo Playgroup
- Ultimo Public School
- Ultimo Village Voice
- Victoria Road Community Committee Inc
- Walsh Bay Precinct Association
- White Bay Precinct

Business Representatives

The following Chambers of Commerce and business representatives were invited to attend the consultation workshops.

- Balmain / Rozelle Chamber of Commerce
- City East Precinct Committee Inc.
- City Partnership Inc
- Glebe Chamber of Commerce
- Haymarket Chamber of Commerce
- Hyde Park Community Voice
- Leichhardt Chamber of Commerce
- NSW Business Chamber
- Pyrmont Ultimo Chamber of Commerce
- Sydney Chamber of Commerce
- The Rocks Chamber of Commerce



Appendix E Social Consultation Workshop Summaries



During the preparation of the Study, Hill PDA held several consultation workshops focusing on the likely social impacts of the proposed CBD Metro. Representatives from numerous community organisations were consulted over a series of three workshops conducted by Hill PDA between April 21st and April 29th 2009.

Organisations that attended the workshops included:

- Callan Park Bush Care;
- The Powerhouse Museum;
- Climate Change Balmain & Rozelle;
- The Council of Ultimo / Pyrmont Associations;
- Darling Street Anglican Church;
- The Pyrmont Action Group;
- The Pyrmont Community Group;
- Pyrmont Progress Incorporated;
- The Rozelle Neighborhood Centre;
- The Rozelle Residents Action Group;
- St Thomas Child Care Centre; and
- Ultimo Village Voice.

General Comments:

Numerous social concerns and potential mitigation methods were discussed during the workshops. The general view was that the project would be viewed more positively, if there was more community engagement regarding key issues and the delivery of more specific information regarding the construction and operation of the CBD Metro.

The integration of the project with other local developments, modes of transport and ticketing were topics of priority and identified as important mechanisms to ensure the best possible outcome regarding the CBD Metro.

Matters such as noise, vibration disturbance, and traffic congestion were raised as key issues. In addition, an alternative site for stations in Pyrmont and Rozelle to avoid the displacement of important community facilities was also raised by respondents.

Key Issues & Observations

Pyrmont:

- It was established that cyclists use Pyrmont as a thoroughfare. Station entrance and exit points (as well as construction sites) could create conflict between users of the CBD Metro and the cyclists. This needs to be managed appropriately (i.e. station locations on the periphery of Union Square and clear demarcation of cycle lanes).
- It was noted that The Mustard Seed Church (Pyrmont) regularly uses Union Square. Disturbances would impact this social meeting place and community events held there negatively (i.e. Anzac



Day, Christmas Carols etc). There are no alternative spaces available in Pyrmont to host activities such as these.

- The CBD Metro will amount to more foot traffic, which will possibly generate more business positively.

Rozelle:

- The view that Rozelle is already extremely well serviced by public transport was raised in light of the existing 22 bus services that extend to Sydney CBD. Queries were raised as to why Rozelle was chosen for a CBD Metro station and whether it was going to become the foundation of a greater network.
- Environmental issues were raised specifically in relation to trees being pulled down from proposed development sites. The garden surrounding the Anglican Church Hall, where trees assist in the prevention of excess noise and pollution from the main roads was specified.
- Having a transport interchange at Rozelle could potentially make the area feel like Bondi Junction and negatively affect the areas “unique and boutique” character.
- The concept of the CBD Metro was given support if it was to be extended down Victoria Road and Parramatta Road. It was not considered feasible if it only stops at Rozelle and is not extended.

Overview of the Darling Street Anglican Church and St Thomas Child Care Centre

- St Thomas is a not for profit organisation that has been operating for 60 years. The centre provides long day child care with approximately 100 children currently enrolled. There are approximately 150 children currently on the waiting list for the centre. Over 60% of children residing in the peninsular either attend or are on waiting lists.
- It was agreed that the CBD Metro would provide some benefits for parents accessing the child care centre if the construction site was located elsewhere. If the centre was relocated it would lose many of the currently enrolled children.
- The Anglican Church Hall is used for a range of community services. Services such as weddings and funerals will be disrupted or no longer possible during construction due to noise, dust and other associated disturbances. It is recognised that the Church cannot function without a hall or toilet.
- The development of the CBD Metro would result in the Church losing their long and unique owner/tenant relationship with the child care centre. Furthermore, there would be a loss of approximately \$90,000 in rent a year if the child care centre, hall and billboards could no longer be used as revenue sources.

Opportunities & Mitigation Suggestions:

- Design and access—There are sites for sale along Victoria Road that could be acquired as opposed to disrupting the existing sites in Rozelle. The Rozelle Neighbourhood Centre cannot afford another space that accommodates all of the centre’s needs, particularly in terms of the ratio of indoor to outdoor play area.
- The Rozelle community has identified a potential alternative facility on Darling Street that could satisfy the site selection criteria but the rent is considerably out of the Neighbourhood Centres budget.
- Alternative construction sites and routes were identified in Pyrmont, potentially minimising negative impacts to the community and businesses. It was suggested that the proposed Pyrmont Station



could be placed next to the light rail station as a way of integrating the two transport modes. Other concerns related to the project's impact to heritage in the Pyrmont area.

- There was acknowledgment of coinciding developments occurring in surrounding areas (e.g. Iron Cove Bridge, Tigers Development etc). These issues and the construction of these developments need to be coordinated properly.
- Concern that the precedent set on the Tigers site will facilitate taller buildings in Rozelle, especially over stations. Communities are aware that the State Government might look at selling retail space above or below station sites in order to obtain funding/revenue. Similarly, the proposed Star City hotel development, possibly occurring at the same time as the CBD Metro, needs to be coordinated with the CBD Metro development.
- The need for a Community Liaison Group was raised. The group should include various community representatives from local business owners to residents. The community has many ideas about what should be done and how, and feel they are the best people to advise on such matters.
- A clear picture needs to be presented to the community on what exactly is being planned, and the specifics involved from design through to operation. This is to ensure the community is able to make informed, reasonable and rational comments on the development.
- An information evening is required where the project specifics are made public. A second information evening would then be required where small focus groups could discuss their opinions and ideas regarding the CBD Metro.

Cost:

- The potential cost of travel was raised as an issue.
- Light rail was considered expensive and if the CBD Metro is in the same price range then it most likely will not be used as often as it would if the prices reflected that of the current standard train and bus tickets.

Key Questions during the Social Workshops Included:

- Who at Sydney Metro acts as an advocate for the community?
- What will happen to Union Square during construction?
- What is proposed above ground for the Station and construction sites?
- Where would the Station entry and exit points be?
- What will happen to parking in the area?
- Why is the CBD Metro needed when there are already sufficient public transport services in Rozelle?
- How will Sydney Metro make the Darling Street Church site safe during construction if the buildings at the front and the walls blocking the main roads are removed?
- Will the Darling Street Church and associated uses be affected by noise after construction (i.e. train vibration, noise, announcements etc)?
- There was no mention of the Child Care Centre in the preliminary report, why?



- There is an understanding that planning approval has been granted for 12 stories on the Tigers site. If the CBD Metro station is adjacent to this then will it be integrated? Will the Sydney Metro site seek approval for a 12 story building above the Station as well?
- Regarding the stabling facility, are the current plans incorporating the possible need for additional facilities and area for the next phase of the CBD Metro (i.e. the West Metro)?
- What percentage of land at White Bay is going to be used for the Sydney Metro Project?



Appendix F Economic Consultation Workshop and Meeting Summaries



During the preparation of the study, Hill PDA held several consultation workshops focusing on the economic impacts of the proposed CBD Metro. Representatives from numerous business organisations including Chambers of Commerce and delegates from the Property Council of Australia were consulted with over a series of three workshops conducted by Hill PDA between April 15th and April 22nd 2009.

Organisations included:

- The Pyrmont Ultimo Chamber of Commerce;
- The Rocks Chamber of Commerce;
- The City Partnership Inc;
- The Balmain & Rozelle Chamber of Commerce;
- The Haymarket Chamber of Commerce; and
- The Property Council of Australia (over 11 major business representatives).

General Comments:

Overall, representatives generally acknowledged that the CBD Metro, once completed, would be beneficial for businesses within the proposed areas. It was recognised that a CBD Metro would also be positive if it could be shown that it was bringing people into the various areas and creating a higher level of accessibility for residents and customers.

Business representatives identified considerable concern regarding the construction phase and its impact to the function and viability of businesses. The duration of the construction period and the proposed location of construction sites were also raised as significant matters of concern.

Numerous issues and potential mitigation methods were discussed during the workshops, with the general view that the CBD Metro would be received in a more positive light, if the proposed development was part of a wider Sydney Metro network and integrated transport plan.

Key Issues & Observations

General:

- The majority of representatives requested more information regarding the design and layout of the proposed stations as they will have a significant influence on potential impacts incurred by businesses.
- 'Security' surfaced as a significant concern with the metro network being 25-30 metres underground, when especially at night there are less people using the system.
- There was concern expressed regarding the CBD Metro's timeframe. The issue was raised particularly in reference to necessary property acquisitions, consultations, assessments, funding and construction. The possibility that the project's timeframe might be too tight to adequately address all of these matters was a major concern.
- Representatives requested concrete cost figures of the CBD Metro Project (start to finish) for their own assessment and analysis. This was considered necessary to weigh up the costs and benefits of the project for Sydney.
- The benefits of the project to 'Sydney as a Global City' were considered difficult to measure. There may be some benefit if the CBD Metro is extended across other networks in Sydney (i.e. to the West or North). However at present, the general public are only seeing the large amount of funding



as benefiting a small population of people and therefore they question the value of the development.

- The importance of ensuring integration with other forms of transport and the existing built environment was a high priority. It was acknowledged that while it is an impressive plan in theory (to have a CBD Metro running every 2-3 minutes), it could mean that there are many people alighting at several locations with no where to go. This will be of particular concern if integration with other forms of transport and city attractors is not properly addressed.
- The integration of ticketing was raised as an important facet of the CBD Metro's integration and success.
- The location of station entrances and exits is important. The use of travelators was identified as a method of assisting integration between train stations and destinations.
- There are many great Metro examples world-wide that Sydney should draw on, possibly reducing the 'anxiety' many may be experiencing.
- It was acknowledged that while small business owners (tenants) can see the long term benefits of better infrastructure, it is the impacts of construction during the short term that are a matter of concern.
- If a business suffers for 5 years during construction, then it may no longer be viable (e.g. loss of outdoor seating at cafés due to construction/noise/mess will decrease customer numbers). What is the Government going to do to minimise the impacts to affected businesses?

Rozelle:

- Rozelle based businesses are concerned about any prospect of underground shopping in Rozelle. The community is very anti-development of big box, underground or mall style development preferring to preserve the 'High Street' nature of retailing that the local area is known for.
- Retailers on Darling Street and Victoria Road want to encourage passing trade and CBD Metro commuters to do their shopping above ground in existing outlets. These additional customers will be a 'trade-off' for the disruption created during the construction phase.
- The patronage figures regarding the CBD Metro are going to have to be strong enough to convince businesses in Rozelle that the CBD Metro is going to be a positive contribution to 'business generation'.
- It was noted that business viability may be affected as a result of higher rents, which coincides with shops that are in close proximity to public transport. This could push out some of the smaller businesses and retailers that are characteristic of the area.
- Where is Sydney Metro planning on putting a transport interchange in Rozelle? Concerns regarding safety and congestion if an interchange is placed on / near Victoria Road. There is already a large amount of congestion, this will only create more.
- Little benefit was seen to be gained in Rozelle in terms of tourism as a result of the CBD Metro.
- The movement of people off buses onto the CBD Metro was considered a positive as buses are causing excess congestion in the CBD. As a result, there is obviously a great demand for more public transport, but is Rozelle in particular need of more public transport?

CBD / Central / Haymarket:

- It was recognised that the proposed Central Station has the potential to improve accessibility to Haymarket, thus improving accessibility to surrounding businesses. The Monorail improved



connectivity for commuters around the CBD (in particular tourists) and the integration of the CBD Metro and the Monorail would be ideal.

- There were mixed opinions on the location of the Barangaroo-Wynyard Station and its impact on Barangaroo itself. It was recognised that Barangaroo is relying on a combination of transport options (i.e. the existing heavy rail station at Wynyard and the light rail). Its proposed density and critical mass will be aligned with the proposed station location.

Pymont / Ultimo:

- Many businesses felt that Union Square was an inappropriate location for a construction site. Businesses are already suffering due to lack of car parking for patrons, as well as scaffolding, noise and constant disruption as a result of current development along Harris Street.
- Pedestrian and cyclist safety during construction was a significant issue. It was noted that Pymont has a high proportion of residents and employees that walk and ride to work. Forcing pedestrians out onto the bicycle paths during construction is a major safety concern.
- It was noted that The Bays Precinct Masterplan needs to inform the CBD Metro on key issues regarding the future use of White Bay.
- The Powerhouse Museum considered the project to be beneficial as it is currently isolated in terms of public transport.

Opportunities & Mitigation Suggestions:

Various methods and ideas were put forward to assist in the mitigation of key concerns. They included:

- The connection of the Barangaroo-Wynyard Station to The Rocks in an attempt to make the CBD Metro appealing to The Rocks businesses, customers and visitors.
- The issue of communication was paramount, being proactive and keeping the community up to date with various details of the project and being available to listen to the communities concerns.
- It was suggested that offering compensation to affected businesses via measurable factors such as passing trade, should be implemented to ease anxieties experienced by these businesses.
- Other ways of minimising negative impacts experienced by businesses involved shortening construction time or the completion of all works within a condensed period of time.

Key Questions during the Social Workshops Included:

- Will the CBD Metro actually happen?
- What is Sydney Metro planning for above proposed stations and what opportunities will businesses be given?
- Why is the 'Tigers' site in Rozelle not being used for construction?
- Considering the distance underground that the CBD Metro will be, is there the possibility of multi-level retail development in stations?
- Will the CBD Metro be bringing people (pedestrian traffic) in or out of Rozelle? What are the figures?
- Why is a station at White Bay being safeguarded and not constructed at the same time as the other stations?



- Where is Sydney Metro planning on putting a transport interchange in Rozelle?
- How is the matter of density being addressed in Rozelle with regards to parking provisions during construction and operation? If you're burrowing the tunnel for the rail, why can't you burrow room for an underground car parking area?
- Are alternative sites and locations for stations and construction sites in all areas being investigated? Will the chosen locations be justified as opposed to alternatives?
- How flexible is the \$4.8 billion budget? As underground tunnelling will be well below water level, could this blow out excessively?
- If there is no funding from the federal government then is there no CBD Metro?
- Instead of having a station at Rozelle, why doesn't Sydney Metro put one at Drummoyne or Gladesville? This would be received far more positively by the community and there would be far more value gained as the catchments of commuters is greater.
- What is the CBD Metro's future? What is the bigger picture?
- Barangaroo-Wynyard Station integration, can this connect to Wynyard in some way?
- What will be the impact of construction on businesses and individuals?
- Is the route and station location final or still in discussion?
- Who will benefit from the CBD Metro?



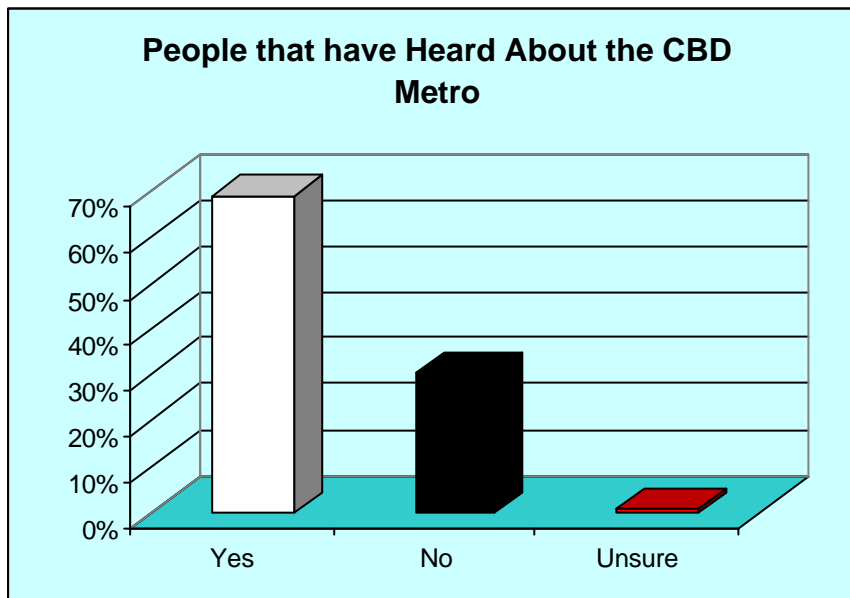
Appendix G Face to Face Survey Summary



The Hill PDA research team conducted face to face interviews with the general public on April 2nd, 8th and 18th. Locations included Haymarket, Central, Sydney CBD, Rozelle, Pyrmont, Darling Harbour, Wynyard and Circular Quay. 134 people were interviewed and the following is a summary of the combined results from each of the locations.

Q. 1 Have you heard about the proposed CBD Metro?

Of the 134 people that participated in the face to face Interviews 70% stated that they had heard of the proposed CBD Metro as seen in the graph below.



Q.2 What social impacts do you think the CBD Metro could have during construction?

91% of people interviewed responded to the social impacts that the CBD Metro could have during construction. Of these respondents an average of 51% felt that the social impacts would become worse in each category allocated. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Availability of community facilities:** 52% of respondents felt that the availability of community facilities would become worse, 28% were unsure and 11% said that it would become significantly worse.
- **Travel time to work:** 61% of respondents stated that travel time to work would become worse, 16% said that it would become significantly worse and 10% were unsure.
- **Travel time to home :** 62% of respondents believed that travel time to home would become worse, 16% said that it would become significantly worse and 10% were unsure.
- **Travel to other destinations:** 60% respondents stated that travel to other destinations would become worse, 17% said that it would become significantly worse and 12% were unsure.
- **Access to work:** 59% of respondents stated that access to work would become worse, 21% said that it would become significantly worse and 13% were unsure.



- **Disturbance i.e. noise and vibrations:** 48% of respondents stated that disturbances such as noise and vibrations would become worse, 34% said that it would become significantly worse and 8% were unsure.
- **Traffic congestion:** 43% of respondents felt that traffic congestion would become worse, 41% said that it would become significantly worse and 9% were unsure.
- **Security and safety:** 40% of respondents stated that security and safety would become worse, 40% were unsure and 11% said that safety and security would become significantly worse.
- **Visual impact:** 50% of respondents stated that the visual impact would be worse, 29% said that it would be significantly worse and 15% were unsure.
- **Employment opportunities:** 36% of respondents stated that they were unsure about employment opportunities, 31% of people stated that they would become worse and 14% said that there would be significantly better opportunities for employment.
- **Parking availability:** 39% of respondents believed that parking availability would become significantly worse, 38% said that parking would become worse and 13% were unsure.
- The average response for all the categories for no effect was 3%
- The average response for all the categories for it getting significantly better was 1%

Q.3 What social impacts do you think the CBD Metro could have upon operation?

In response to what social impacts the CBD Metro could have when operating 84% of people interviewed responded. Of these respondents an average of 39% stated in each category that the social impacts of the CBD Metro when operating would become better. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Travel time to work:** 51% of respondents believed that travel time to work would become better, 25% said that it would become significantly better and 12% said there would be no effect.
- **Travel time to home:** 51% of respondents felt that travel time to home would become better, 25% said that it would be significantly better and 12% said that there would be no effect.
- **Travel to other destinations:** 62% of respondents stated that travel to other destination would become better, 25% said that it would be significantly better and 5% were unsure.
- **Travel costs:** 44% of respondents stated that they were unsure about travel costs, 35% said that it would be better and 11% said that it would become significantly better.
- **Environmental benefits:** 46% of respondents felt that the CBD Metro would result in environmental benefits, 27% were unsure and 20% said that the benefits would be significantly better.
- **Traffic congestion:** 48% of respondents stated that traffic congestion would become better, 20% said that traffic congestion would be significantly better and 17% were unsure.
- **Security and safety:** 50% of respondents stated that they were unsure about security and safety, 23% said that it would be better and 14% said that security and safety would become worse.
- **Visual impact:** 36% of respondents stated that they were unsure about what visual impact the proposed CBD Metro would have, 24% said that it would have a positive visual impact and 20% said that the visual impact would become worse.



- **Parking availability:** 30% of respondents stated that they were unsure about parking availability, 26% said that parking would become worse and 23% said that parking would become better.
- **Disturbance i.e. noise and vibrations:** 38% of respondents stated that disturbance from the CBD Metro would become worse, 29% were unsure and 17% said that it would be better.
- **Employment opportunities:** 46% of respondents stated that employment opportunities would become better, 35% were unsure and 14% said that it would be significantly better.
- An average of 5%, of respondents stated that there would be no effect in each category.

Q.4 What economic impacts do you think could occur during construction of the CBD Metro?

In response to the likely economic impacts that the CBD Metro could have during construction, 86% of people interviewed responded. Of these respondents an average of 31% stated in each category that the economic impacts would become worse, while 25% were unsure. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Property and land values:** 32% of respondents stated that property and land values would become worse, 28% were unsure and 15% felt that land values would improve.
- **Employment opportunities:** 40% of respondents believed that employment opportunities would become better, 26% felt there could be less opportunities and 16% were unsure.
- **Local business generation:** 37% of respondents stated that local business generation would become worse, 31% said that it would become better and 21% said that local business generation would become significantly worse.
- **Tourism:** 29% of respondents stated that they were unsure about the likely economic impact on tourism by the construction of the CBD Metro, 27% said that it would be worse while 14% said that tourism would become significantly worse.
- **Crime:** 45% of respondents stated that they were unsure about crime, 31% stated that crime would be worse while 11% said that it would become significantly worse.
- An average of 25%, of respondents stated that they were unsure in each category of the economic impacts during construction.
- An average of 31%, of respondents stated in each category that the economic impacts during construction would become worse.

Q.5 What economic impacts do you think could occur during operation of the CBD Metro?

In response to what economic impacts could occur during the operation of the CBD Metro, 85% of people interviewed responded. Of these respondents an average of 48% stated that the economic impacts during operation would become better, while an average of 23% of respondents said that it will become significantly better. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Property and land values:** 58% of respondents believed that property and land values will become better, 22% said that they will become significantly better and 12% were unsure.
- **Enhance Sydney as a global city:** 58% of respondents stated that the enhancement of Sydney as a global city would become better, 33% said that it would be significantly better and 7% were unsure.



- **Travel time:** 53% of respondents stated that travel times would become better, 32% said that travel times would become significantly better and 8% were unsure.
- **Employment opportunities:** 52% of respondents stated that employment opportunities would become better, 20% said that they would become significantly better and 17% were unsure.
- **Local business generation:** 56% of respondents stated that local business generation would become enhanced, 28% said that it would become significantly better and 7% stated that local business generation would become worse.
- **Tourism:** 44% of respondents stated that tourism would become better, 30% were unsure and 18% said that tourism would become significantly better.
- **Crime:** 56% of respondents stated that they were unsure about impacts relating to crime, 18% stated that crime would become worse and 14% said that crime would become better.
- An average of 48% of people surveyed stated in each category that economic impacts during operation would be better, while 23% stated it would be significantly better.

Q.6 How do you think the CBD Metro could affect the following areas during construction?

In response to question six the four most frequently cited responses to how the CBD Metro could affect the following areas during construction have been summarised below.

Sydney CBD

- An increase in traffic congestion causing delays and frustration.
- An increase in dirt and grit due to construction.
- An increase in noise which may affect businesses.
- No change to present.

Haymarket / Central

- An increase in traffic congestion.
- An increase in people causing crowding.
- No change to present.
- Increased pollution due to the construction.

Plymouth / Ultimo

- Loss of heritage sites.
- Loss of business due to noise and traffic.
- Traffic congestion.
- Increase in noise and pollution.

Rozelle / Lilyfield



- Loss of village feel.
- Traffic congestion particularly along Victoria rd.
- Increase in noise and pollution.
- Detract from café lifestyle because of increased noise and dirt.

In summary the main responses to the question related to: increased traffic congestion, noise and pollution. A significant proportion of respondents stated that there would be no change during construction in Sydney CBD or Central. Respondents interviewed in Rozelle and Pyrmont felt that the noise, traffic and pollution impacts would become significant in those areas.

Q.7 How do you think the Sydney CBD Metro could affect the following areas during operation?

In response to question seven the most frequently cited responses to how the project could affect areas upon operation have been summarised below.

Sydney CBD

- Less traffic congestion and pedestrians.
- Little effect as benefits will be negated by population growth.
- Stations would be quieter and benefit from less congestion.
- Less time commuting to work, more happy people commuting.
- Will there be other options to the CBD Metro, in the form of alternative public transport?

Haymarket / Central

- The area would become better connected to CBD.
- The area would have less traffic.
- Central station would become even busier.

Pyrmont / Ultimo

- Greater connectivity to the CBD and other areas.
- Less traffic in the area.
- Increase in property values.
- Will increase the amount of people such as tourists coming to visit the area.
- Area will become easier to get too.
- Will not change a lot/ be much different.

Rozelle/Lilyfield

- Their will be a loss of village feel in Rozelle.
- Will help ease congestion on roads.



- Higher property prices not sure if this is a negative or positive impact however.
- More people in the area.
- Better connected to the CBD.
- Better for residents and visitors.
- Could result in fewer buses which would be negative.

In summary the majority of respondents felt that the CBD Metro, upon operation would result in: better connectivity, less congestion and increased property values. A number of people were concerned that the completion of the CBD Metro would result in the cancellation of some current public transport services such as bus routes, which could have a negative impact on the existing communities.

Q.8 Would you have used the CBD Metro if it were available today?

Of the 134 people that participated in the face to face interviews 65% responded to this question. The majority of respondents 62% answered 'no' while the remaining 38% stated 'yes'. This can be seen in the figure below.

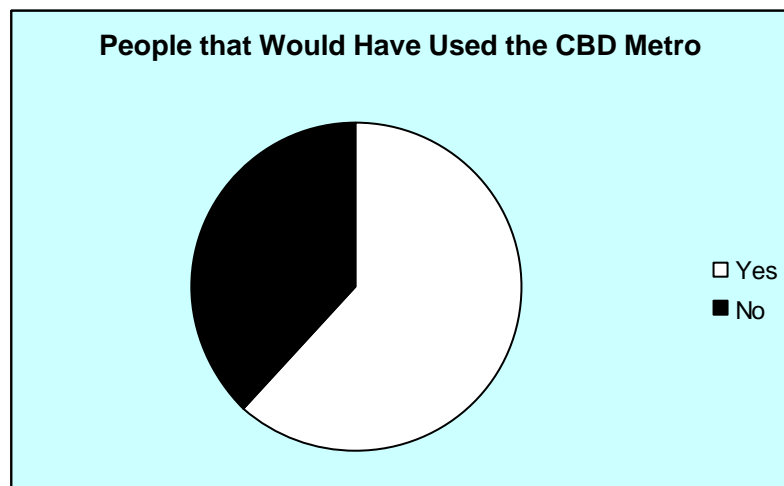
The main reasons why the respondents would or wouldn't have used the CBD Metro are summarised below.

Yes

- To move around the CBD.
- To get to the CBD or proposed suburbs.
- For leisure purposes.
- To get to university.
- To meet friends in Pyrmont.

No

- Do not live near stations.
- Live on the north shore or outside the Sydney CBD.
- Happy using alternative transport such as the bus, car, train and light rail.
- Not leaving Rozelle.
- The money is better spent elsewhere.

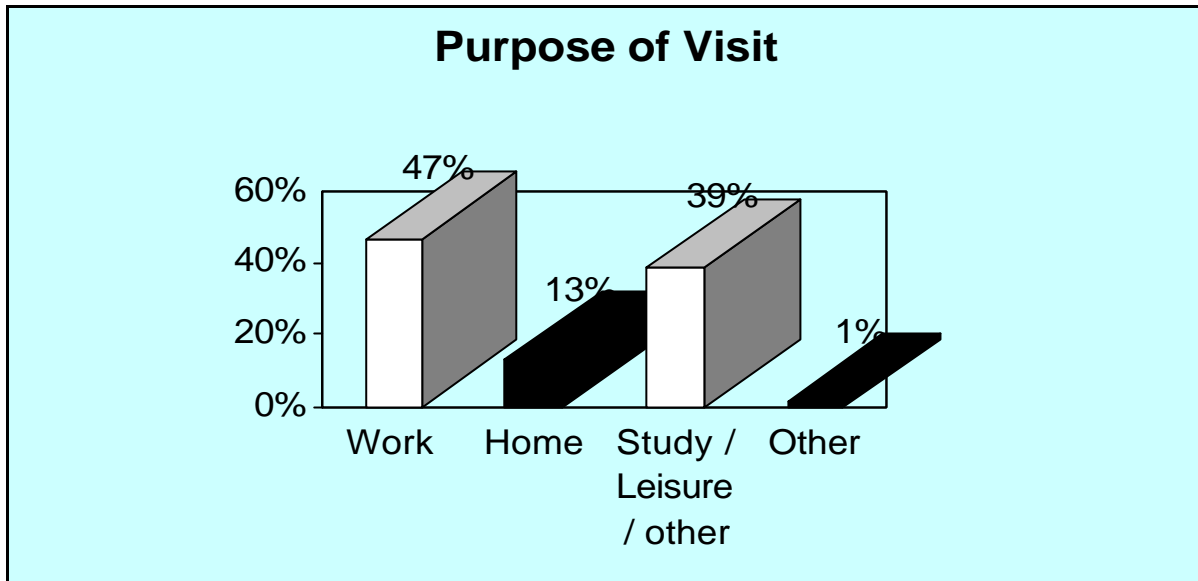


In summary the main reasons why respondents would have used the CBD Metro on the day of questioning were: travel to work, trips to the suburbs and for leisure to the CBD.

Q.9 What is the purpose of your visit today?

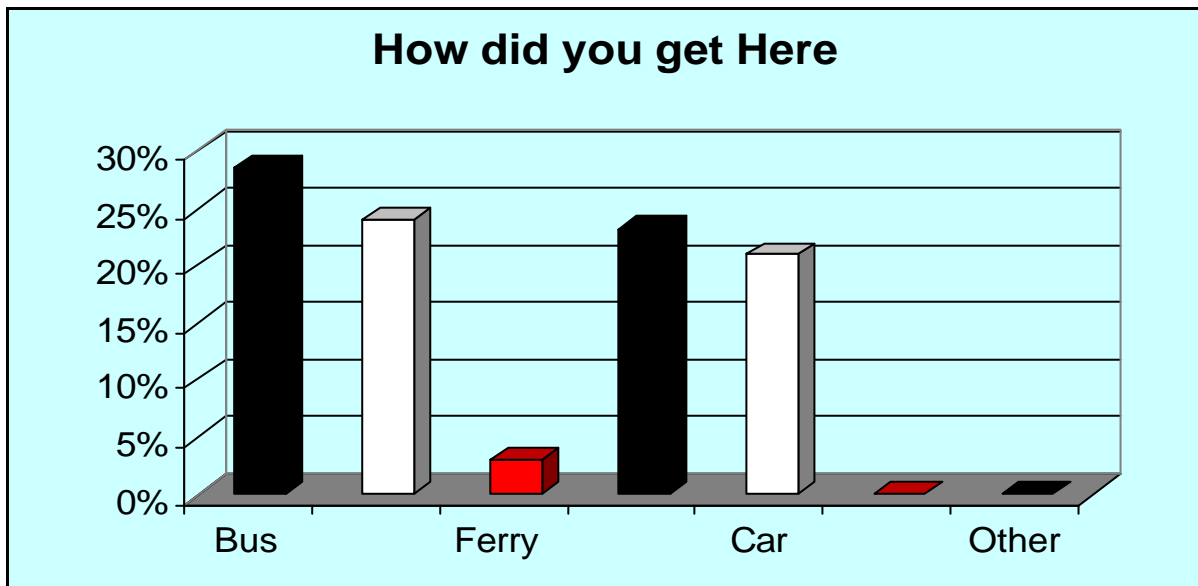
Of the 134 people that participated in the face to face interviews, 96% of people responded to this question. Of the 96% that responded 47% purpose was for work, 13% purpose was returning home, 39% purpose was for study and 1% had come for other purposes. This can be seen in the graph below.





Q.10 How did you get here today?

Of the 134 people that participated in the face to face surveys 133 responded to this question. Of the respondents 29% had come by bus, 24% by train, 3% by ferry, 23% had walked, 21% by car. This can be seen in the graph below.



Q.11 Do you have anymore comments about the potential social or economic affects of the proposed Sydney CBD Metro?

Responses to the above question can be separated in to positive and negative comments the most frequently cited comments have been summarised below.

Positive

- Connects Sydney better.
- Takes pressure of busses and light rail.



- Diversifies current public transport.
- The Sydney Metro needs to be more vocal about project, and needs to provide more information.
- Dose the cost of the CBD Metro outweigh the benefits?
- The Metro system is vital to Sydney.
- Better for tourism.
- The CBD Metro will make Sydney a more competitive city in public transport.

Negative

- Not really needed, CBD already has enough public transport.
- Existing public transport is effective.
- There is a great need for a system that connects to the north, south and west.
- The CBD Metro is a waste of money and the money is better spent elsewhere.
- 5 years of construction is a long time, the sooner it is completed the better.
- Money should be spent updating current stations.
- Should move the project away from Union Square.
- Parking concerns around stations, with more people coming in to use it.
- Entrance and exit points should be tucked away to minimise impact to other uses and cyclists.
- Need to address access to the city, not in the city.
- People need to be more informed about the cost, construction and environmental issues.
- Safety concerns about driverless trains.
- Should subsidise the tickets to make it more attractive.
- The CBD Metro will not go ahead.
- How much will the tickets cost?

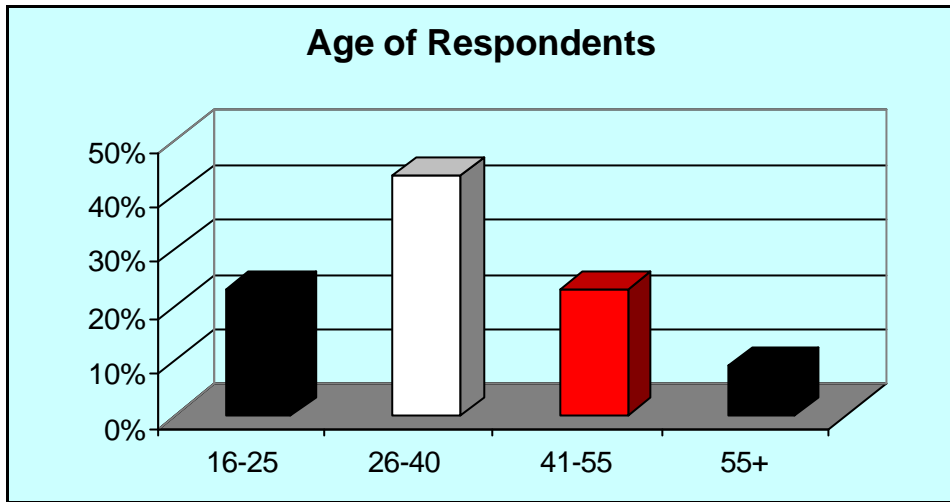
Q.12 Gender of Respondents

Of the 134 people that participated in the face to face interviews 52% were female and 48% were male.

Q.13 Age of Respondents

Of the 134 people that participated in the face to face interviews 124 responded to this question. Of the respondents 23% were aged 16-25, 44% were aged 26-40, 23% were aged 41-55% and 9% were 55+. This can be seen in the graph below.





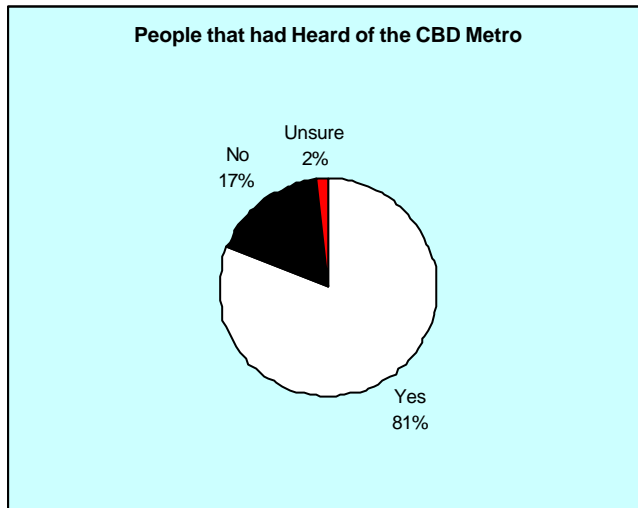
Appendix H Telephone Survey Summary



The Hill PDA research team conducted phone surveys with the general public on April 15th, 16th, 22nd and the 6th of May in various locations including Chippendale, Pyrmont, Rozelle and Ultimo. 133 people were participated in the phone surveys and the flowing is a summary of the combined results from each of the locations.

Q.1 Have you heard about the proposed CBD Metro?

Of the 133 people that participated in the phone surveys 81% of respondents had heard of the proposed CBD Metro compared to 17% that had not heard of it. This can be seen in the graph below.



Q.2 What social impacts do you think the CBD Metro could have during construction?

In response to what social impacts do you think the CBD Metro could have during construction 81% of people that participated in the phone surveys responded. Of these respondents an average of 44% felt that the social impacts would become worse in each category. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Travel time** : 57% of respondents believed that travel time would become worse, 20% were unsure and 10% said that travel time would become significantly worse.
- **Travel costs**: 35% of respondents felt that travel costs would become worse, 34% were unsure and 22% said that there would be no effect.
- **Loss of facilities**: 43% of respondents stated that loss of facilities would become worse, 33% were unsure and 15% believed that there would be no effect.
- **Construction noise and disruptions**: 52% of respondents stated that construction noise and disruptions would become worse, 22% said it would become significantly worse and 15% stated that there would be no effect.
- **Access to home/work/study venues**: 55% of respondents felt that access to home, work and study venues would become worse, 16% believed that there would be no effect 15% were unsure.
- **Carbon emissions**: 51% of respondents stated that carbon emissions would become worse, 27% were unsure and 10% said carbon emissions would become significantly worse.
- **Traffic congestion**: 44% of respondents believed that traffic congestion would become worse, 37% said traffic congestion would become significantly worse and 11% were unsure.



- **Crime and safety:** 52% of respondents were unsure about crime and unsafety during construction, 24% felt that they would become worse and 17% said that there would be no effect during construction.
- **Visual impacts:** 51% respondents felt that the visual impacts during construction would become worse, 16% were unsure and 21% said the visual impact would become significantly worse.
- **Employment opportunities:** 32% of respondents were unsure about employment opportunities during construction, 30% said that they would become worse and 21% said that employment opportunities would become better.
- The average response in each category for no effect was 13%.
- The average response in each category for becoming better was 4%

Q.3 What social impacts do you think the CBD Metro could have upon operating?

In response to the social impacts that the CBD Metro could have when operating 81% of people that participated in the phone surveys responded. Of these respondents an average of 29% stated that things would become better in each of the categories. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Travel time :** 44% of respondents felt that travel time would become better when the CBD Metro was operating, 23% said travel time would become significantly better and 18% were unsure.
- **Travel costs:** 49% of respondents were unsure about the travel costs when the CBD Metro was operating, 16% stated that they would become better and 15% said travel costs would become significantly better.
- **Access to home/work/study venues:** 37% of respondents believed that access to home, work and study venues would become better, 23% said they would become significantly better and 19% were unsure.
- **Environmental benefits:** 31% of respondents were unsure about the environmental benefits of the CBD Metro upon operating, 25% felt that the environmental benefits would become significantly better and 25% said it would become better.
- **Traffic congestion:** 35% of respondents stated that traffic congestion would become better, 21% said traffic congestion would become significantly better and 16% were unsure.
- **Crime and safety:** 42% of respondents were unsure about crime and safety during operation of the CBD Metro, 18% felt that there would be no effect on crime and safety and 17% said that crime and safety would become better.
- **Visual impacts:** 27% of respondents were unsure about the visual impacts of the CBD Metro upon operation, 22% believed that the visual impact would become better and 20% felt that it would become worse.
- **Employment opportunities:** 39% believed that employment opportunities would become better, 33% were unsure and 20% said that the employment opportunities would become significantly better.
- The average response in each category for no effect was 11%.
- The average response for unsure in each category was 29%.



Q.4 What economic impacts do you think might occur during the construction of the CBD Metro?

In response to what economic impacts that might occur during that construction of the CBD Metro 79% of people surveyed responded. Of these respondents an average of 38% stated that thing would become worse in each of the categories. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Property and land values:** 41% of respondents felt that property and land values would become worse, 32% were unsure and 10% believed that there would be no effect.
- **Employment opportunities:** 33% of respondents stated that employment opportunities would become worse, 31% were unsure and 17% said that employment opportunities would become better.
- **Local business generation:** 53% of respondents believed that local business generation would become worse, 14% said that business generation would become significantly worse and 14% felt that it would become better.
- **Tourism:** 32% stated that tourism would become worse, 30% were unsure and 23% said that there would be no effect on tourism.
- **Crime:** 46% were unsure about the social impacts of crime during construction, 25% felt that crime would become worse and 19% said that there would be no effect on.
- **Travel time:** 46% of respondents stated that travel time would become worse, 21% were unsure and 17% said that travel time would become significantly worse.
- The average response in each category for no effect was 12%.

Q.5 What economic impacts do you think might occur during the operation of the CBD Metro?

In response to what economic impacts that might occur during the operation of the CBD Metro 84% of people that participated in the phone surveys responded. Of these respondents an average of 36% stated that thing would become better in each category. A further break down of the top three responses (in order of frequency) for each category has been provided below.

- **Property and land values:** 38% of respondents felt that property and land values would become better, 27% believed that they would become significantly better and 24% were unsure.
- **Sydney as a global city:** 35% of respondents believed that Sydney as a global city would become better upon operation, 33% said that Sydney as a global city would become significantly better and 22% were unsure.
- **Travel time:** 44% of respondents stated that travel time would become better upon operation, 27% felt travel time would become significantly better and 14% were unsure.
- **Employment opportunities:** 46% of respondents believed that employment opportunities would become better, 24% were unsure and 19% said that employment opportunities would become significantly better.
- **Local business generation:** 53% of respondents felt that local business generation would become better upon operation, 22% said that local business generation would become significantly better and 15% were unsure.



- **Tourism:** 30% of respondents were unsure about tourism upon operation of the CBD Metro, 25% believed that tourism would become significantly better and 25% felt that it would become better.
- **Crime:** 48% of respondents were unsure about crime upon operation, 25% stated that there would be no effect on crime during operation and 12% said that crime would become better.
- The average response in each category for things becoming significantly better was 23%.
- The average response in each category for there being no effect was 11%.

Question 6. How do you think the CBD Metro could affect the following areas during construction?

In response to question six the most frequently cited responses to how the CBD Metro could affect the following areas during construction have been summarised below.

Sydney CBD

- There would be long traffic delays.
- The city would be worse with even more mess and noise.
- There would be disruptions galore but in the end it is better for Sydney.
- The people in the city are use to construction sites. They don't really notice it anymore.

Haymarket / Central

- Haymarket and Central would be worse of with an increase in noise and pollution.
- The disruptions would be bad but it is for a good reason.
- Haymarket and Central will experience no change due to the construction.

Pymont / Ultimo

- The area would become busier.
- Due to an increase in people parking would become scarce.
- Due to the construction noise will increase.
- The disruptions would be bad but it is for a good reason.
- This area is used to construction and redevelopment, so it would have no effect.

Rozelle / Lilyfield

- The construction would cause long traffic delays.
- Parking would become hard to find during construction.
- Pollution would increase along with noise.
- The area is already bad enough.
- Rozelle and Lilyfield would become even busier.



In summary the main responses related to: noise, pollution, an increase in people and traffic congestion. A significant proportion of the respondents stated that disruptions come with any construction site and are inevitable, but the outcome of the CBD Metro in Sydney is worth the delays and other affects of construction.

Question 7. How do you think the CBD Metro could affect the following areas during operation?

In response to question seven the most frequently cited responses to how the CBD Metro could affect the following areas during operation have been summarised below.

Sydney CBD

- The CBD Metro would be an improvement on the public transport network in Sydney.
- There would be no effect when the operations phase of the CBD Metro commences.
- The CBD Metro would just be another option in the cities public transport.

Haymarket / Central

- Unsure of the effect of the CBD Metro during operation in Haymarket and Central.
- Another public transport option for the area.
- The result should be great if it actually goes through.
- There would be no effect.

Pyrmont / Ultimo

- The public transport system would be more efficient.
- The operation of the CBD Metro would bring more business to the area because of the easy access.
- The area would be quieter and cleaner.
- Would make the area more accessible.

Rozelle / Lilyfield

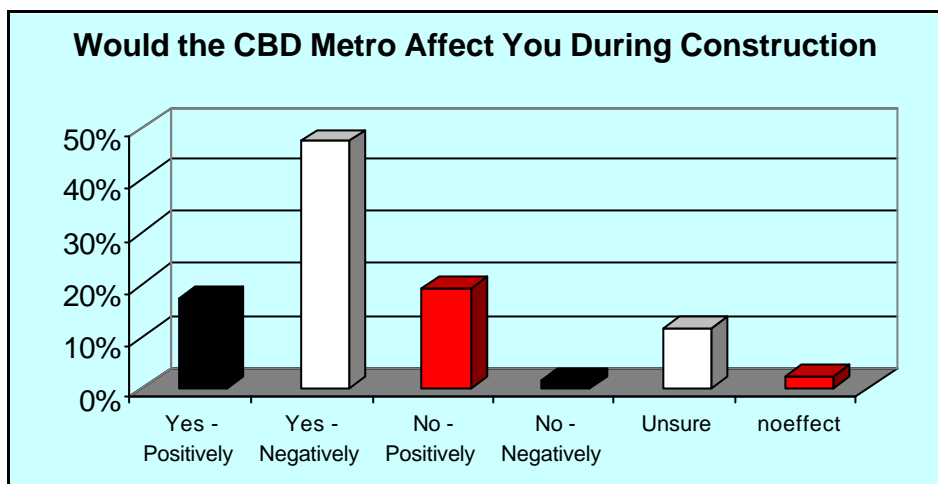
- Less traffic on the roads especially in the mornings.
- There would be less parking as more people drive to use the CBD Metro.
- The area would have better connectivity to the city.
- The CBD Metro would bring more people to the area.

In summary the main responses to the question related to: improvement in the public transport network, higher efficiency of the transport network and the areas would be better connected. A significant proportion of the respondents thought that the effects of the CBD Metro in the Sydney CBD would be least felt due to the already high number of transport options.

Question 8. Do you think the Sydney CBD Metro might affect you during construction?

Of the 133 people that participated in the phone surveys 120 people responded to this question. Of these respondents 48% stated that the construction of the CBD Metro would have a negative impact on them, while 12% were unsure. This can be seen in the figure below.





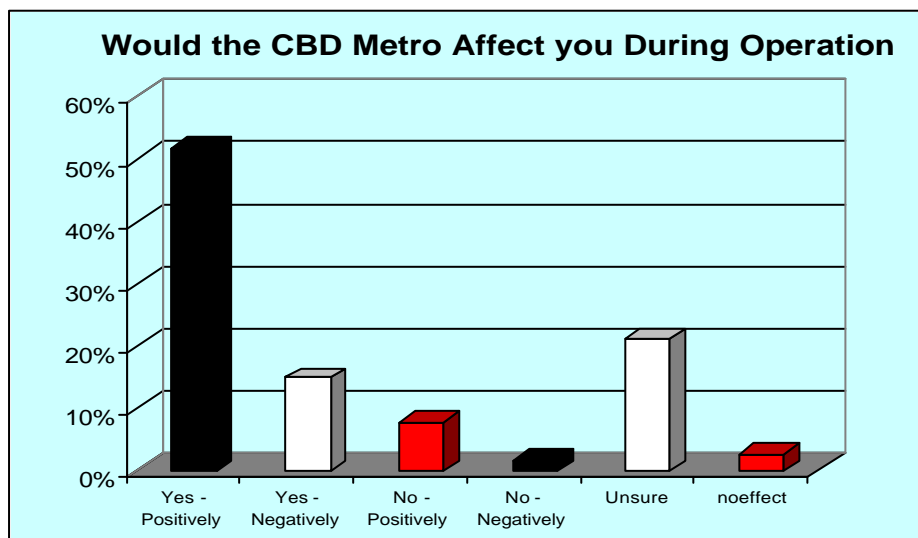
Of the 120 respondents the reasons why the CBD Metro could affect them during construction are summarised as follows.

- There would be an increase in traffic congestion.
- There would be an increase in noise, mess and pollution.
- There would be a loss in village community feel in Rozelle.
- Where are the proposed stations going?

In summary the main responses to the question related to: an increase in traffic congestion, noise, mess and pollution.

Question 9. Do you think the Sydney CBD Metro might affect you during operation?

114 people responded to this question during the phone surveys. Of these respondents 52% felt that the operation of the CBD Metro would have a positive affect on them, 21% were unsure and 15% believed that the operation of the CBD Metro would have a negative impact on them. This can be seen in the figure below.



Of the 114 people that responded to this question the main areas that the respondents felt that CBD Metro might affect them during operation are summarised as follows.



- The CBD Metro would make the commute to work a lot faster.
- It would be easier and more efficient to get into the city.
- The CBD Metro will have no affect as the bus service is very efficient.
- Will other transport services be cut?

In summary the main responses related to the question were: the commute to work and the city generally would become greatly increased.

Q.10 If you feel that you will be adversely affected, what methods would you suggest be applied to deal with these issues?

Of the 133 people that participated in the phone surveys the main areas that the respondents thought that CBD Metro might negatively affect them and the methods they would suggest to be applied to deal with these issues are summarised as follows;

- Keep all of the construction underground.
- Inform the public more about the CBD Metro.
- Spend the money on updating the current heavy rail system.
- Create extra bus services during the construction period.
- Provide free public transport during construction period

In summary the main responses related to the question were: providing more and free public transport during the construction period. Also the majority of respondents would like more information to be provided about the CBD Metro.

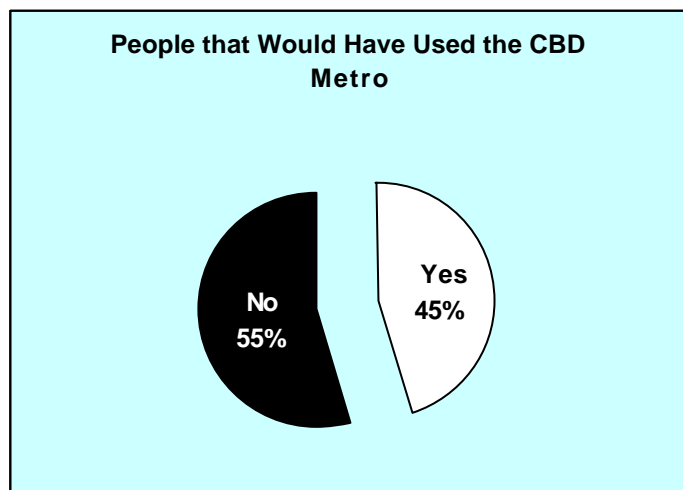
Q.11 Would you have used the Sydney CBD Metro if it were available today?

Of the 133 people that participated in the phone surveys 65 responded to this question. Of the respondents 55% stated that they would not have used the CBD Metro while 45% stated that they would have used the CBD Metro. This can be seen in the graph below.

Of the 65 people that responded to this question the main reason why the respondents would or wouldn't have used the CBD Metro are summarised below.

Yes

- Would have used it out of curiosity.
- Would have used it to go to work in the CBD.
- Would have used it for leisure trip to the CBD.
- Maybe if there was a station near where I went today.



In summary the main responses related to the question were: for work, trips for leisure to the CBD and for curiosity.



No

- Don't know the locations where it goes.
- Don't like change.
- No would not have use, used the bus services instead.
- No would not have used as I am at home all day.
- Did not work today so did not travel into the CBD.

In summery the main responses related to the question were: that they did not leave the suburb they were in.

Q.12 Do you have anymore comments about the potential social or economic affects of the proposed Sydney CBD Metro?

Of the 133 people that participated in the phone surveys the responses for comments about the potential social or economic affects of the proposed Sydney CBD Metro are summarised below;

- The CBD Metro is a waste of tax payer money.
- If there was a station at circular that would ensure people were able to catch their connecting ferry then it would be hugely beneficial.
- Sydney is behind the rest of the world in its public transport system.
- There is already enough public transport in the CBD and on Victoria Rd.
- The CBD Metro would help ease congestion along Victoria Rd which is a good thing.
- Parking in the proposed suburbs will be difficult as more cars come to use the stations.
- The government should extent the light rail instead.
- The CBD Metro should connect the northern suburbs instead.

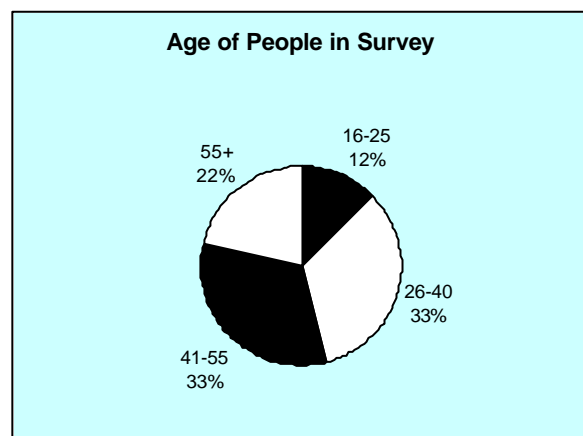
In summery the main responses related to the question were: that the CBD Metro money should be spent on the existing light or heavy rail, the northern suburbs should be connected and the CBD Metro would help with congestion in the city and Victoria Road.

Q.14 Gender of Respondents

Of the 133 people surveyed 130 responded to this question. Of these respondents 52% were females and 48% were males.

Q.15 Age of Respondents

Of the 133 people surveyed 129 responded to this question. Of these respondents 33% were aged between 26 years and 40 years, 33% were aged between 41 years and 55 years, 22% were aged 55 years plus and 12% were aged between 16 years and 25 years.



Appendix I Business Survey Summary



The Hill PDA research team hand delivered 180 business surveys to businesses located in Sydney CBD, Darling Harbour, Haymarket, Central, Wynyard, Circular Quay, Pyrmont and Rozelle. The surveys were delivered on the 15th, 16th and 22nd of April 2009.

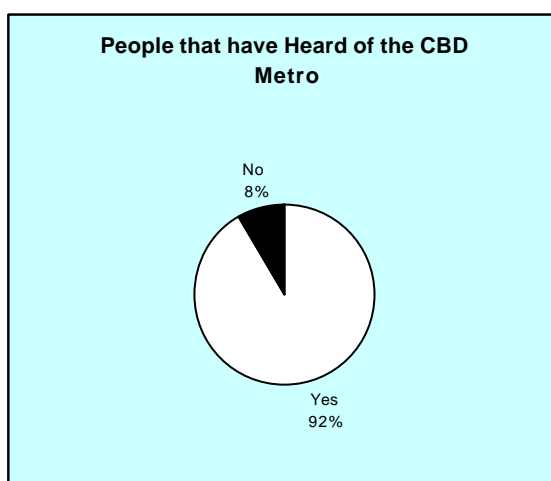
Businesses that received the surveys could either return the completed surveys by mail to Hill PDA or conduct them online at the Hill PDA web site (www.hillpda.com) where the majority of the surveys were completed.

A wide range of businesses completed the surveys including café's, pharmacy's, hairdressers, clothing shops, hotels and a book shop. The surveys were also completed by a range of employees and business owners including sales assistants, directors, managers, owners and licensees.

The following is a summary of the combined mail and online business survey results. It should be noted when reviewing these survey results that the responses are opinions and owing to the modest rate of response, the results do not represent a statistically valid survey.

Q.1 Have you heard about the CBD Metro?

Of the businesses that responded to this question, 92% stated that they had heard of the proposed CBD Metro while the remaining 8% said they had not heard of the CBD Metro. This can be seen in the graph below.



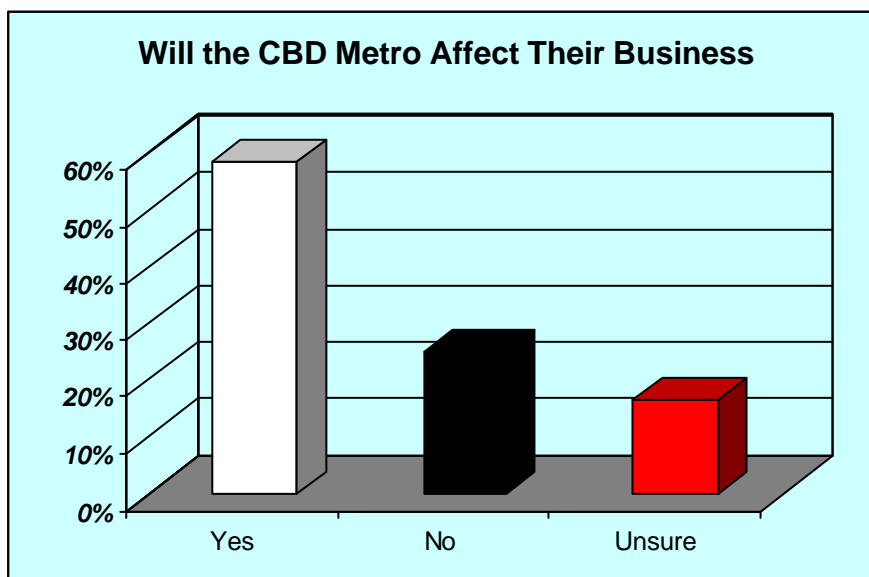
Q.2 Do you think the proposed CBD Metro will affect your business during construction?

Of the business that responded to this question 58% stated that the CBD Metro would affect their business during construction, 25% said that the construction would not affect their business and 17% were unsure. This can be seen in the adjacent graph.

Q.3 If you answered yes to Question 2, how would the CBD Metro affect the following.

Of the businesses that responded to this question, 46% stated that the CBD Metro would affect their business in a negative way during construction.

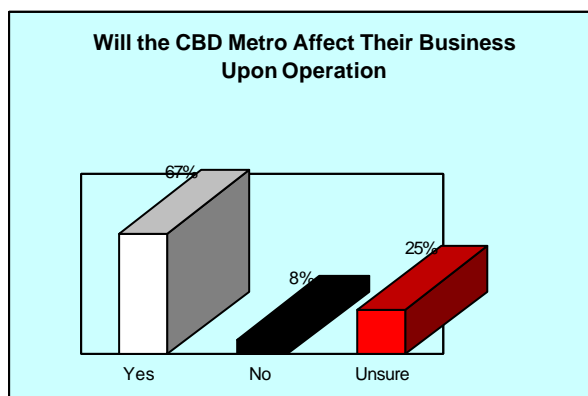
An average of 3% stated that the construction of the CBD Metro would have a positive affect on their business. A further break down of the responses (in order of frequency) for each of the categories is provided below.



- **Turnover:** 50% of respondents stated that turnover would become worse and 50% were unsure of the affect of construction on their business.
- **Staff travel time:** 50% of respondents stated that staff travel time would become worse during construction, while 50% were unsure.
- **Customer access:** 50% of respondents believed that customer access during construction would become worse, while 50% were unsure.
- **Number of customers:** 60% of respondents felt that the construction would have a negative effect on the number of customers, 30% were unsure and 10% stated that the number of customers would increase.
- **Traffic congestion:** 70% of respondents believed that traffic congestion would become worse during construction, while 30% were unsure.
- **Parking availability:** 50% of respondents stated that the availability of parking during construction would become worse, while 50% were unsure.
- **Business opportunities:** 50% of respondents were unsure about business opportunities during construction, 40% felt that they would become worse and 10% felt that business opportunities would become better.
- **Staff recruitment & retention:** 50% of respondents stated that they were unsure about staff recruitment and retention during construction, 40% believed that it would become worse and 10% said it would be better.
- **Disturbances i.e. noise, vibration:** 60% of respondents stated that disturbances (such as noise and vibration due to construction) would become worse, while 40% were unsure.
- **Visibility of business to customers:** 80% of respondents were unsure about the affect of the project to the visibility of their business to customers during construction, while 20% felt that it would become worse.
- **Property/land value:** 80% of respondents were unsure about property and land values during construction, while 20% felt that property and land values would become worse.

Q.4 Do you think the proposed CBD Metro could affect your business once it operates?

67% of respondents to this question felt that the CBD Metro would affect their business upon operation, 25% were unsure while 8% believed that the CBD Metro would not affect their business upon operation. This can be seen in the graph below.



Q.5 If the proposed CBD Metro would affect your business once it operates how would it affect the following:

An average of 22% of respondents felt that the CBD Metro would have a negative impact on their business once it became operational compared to 19% of respondents who felt that the CBD Metro on operation would have a positive impact to their business. A further break down of the responses (in order of frequency) for each of the categories is provided below.

- **Turnover:** 55% of respondents were unsure about turnover upon operation of the CBD Metro, 36% felt that turnover would become worse while 9% said that turnover would become better once the CBD Metro was in operation.
- **Staff travel time:** 45% of respondents were unsure about staff travel time upon operation of the CBD Metro, 36% believed staff travel time would become better while 18% said it would become worse.
- **Customer access:** 64% of respondents were unsure about customer access upon operation of the CBD Metro, 27% stated that customer access would become worse while 9% felt that it would become better.
- **Number of customers:** 70% of respondents were unsure about customer numbers upon operation of the CBD Metro, 20% stated that customer numbers would become worse while 10% felt that they would be better.
- **Traffic congestion:** 45% of respondents were unsure about traffic congestion upon operation of the CBD Metro, 27% felt that traffic congestion would become better while 27% believed that it would become worse.
- **Parking availability:** 55% of respondents were unsure about parking availability upon operation of the CBD Metro, 36% stated that parking would become worse while 9% felt that parking would become better.
- **Business opportunities:** 50% were unsure about the business opportunities upon operation of the CBD Metro, 30% believed that they would become better while 20% said business opportunities would become worse.
- **Staff recruitment & retention:** 50% of respondents were unsure about staff recruitment and retention upon operation of the CBD Metro, 30% felt that they would become better while 20% said they would become worse.
- **Disturbances i.e. noise, vibration:** 70% of respondents were unsure about disturbances such as noise and vibrations upon operation of the CBD Metro, 20% felt that disturbances would become better while 10% stated they would become worse.
- **Visibility of business to customers:** 70% of respondents were unsure about the affect of the project to the visibility of their businesses to customers upon operation, 20% stated that it would become worse while 10% felt that visibility would become better.
- **Property/land value:** 70% of respondents were unsure about property and land values upon operation of the CBD Metro, 20% felt that they would become better while 10% stated that property and land values would become worse.

Q.6 How do you think the CBD Metro could affect the following areas during construction?

In response to question six the most frequently cited responses to how the CBD Metro could affect the given areas during construction have been summarised below.



Sydney CBD:

- There will be an increase in traffic congestion.
- There will be disruption to the public transport network causing delays.
- There will be interruption to the normal operation of businesses around construction sites.
- There should be little impact except around the proposed railway station sites.

Haymarket/Central:

- There will be an increase in traffic congestion notably around George Street.
- Access to railway stations will be hampered by construction.
- There will be disruption to the public transport network causing delays.
- There will be no major delays to traffic flow.

Plymouth/Ultimo:

- The areas will become chaotic as people try to negotiate around the construction sites.
- The construction of the CBD Metro will disrupt local businesses.
- There will be an increase in traffic congestion.
- Access to retail shops will become more difficult.

Rozelle/Lilyfield:

- Interruption to normal business operation will be experienced.
- There will be disruption to the public transport network causing delays.
- Access to retail shops will become more difficult.
- Unsure of the affects of the project's construction.

Q.7 How do you think the CBD Metro could affect the following areas once operating?

In response to question seven the most frequently cited responses to how the CBD Metro could affect the following areas once operating have been summarised below.

Sydney CBD:

- There will be an improvement in public transport access from the inner west to Sydney CBD.
- The CBD will become even busier as more people can access it easier.
- The operation of the CBD Metro may be beneficial to Sydney's CBD.
- There will be a increase in traffic congestion.

Haymarket/Central:

- Light rail will be affected as more people use the CBD Metro.
- The area will experience an increase in people.



- There will be less traffic congestion.
- There will be an increase in traffic, which will see a rise in business opportunities.

Pyrmont/Ultimo:

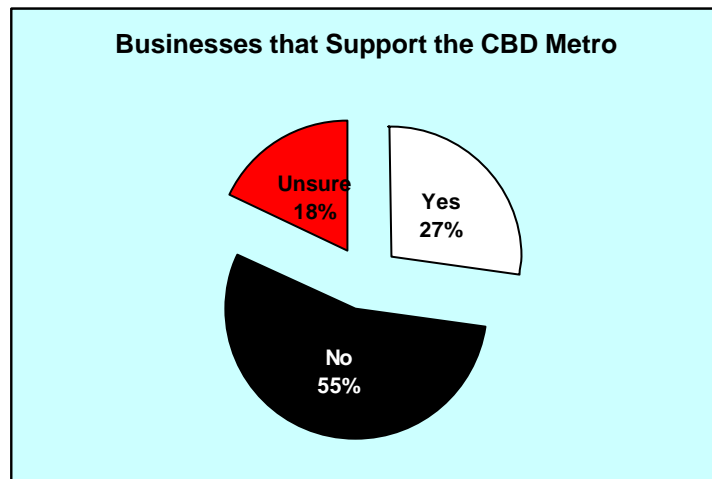
- There will be less traffic congestion once the CBD Metro is operating.
- There will be environmental benefits as more people use the CBD Metro.
- There will be greater availability of staff to work in the city.
- Public transport into the city will be increased.

Rozelle/Lilyfield:

- Developments will become more feasible in the area.
- Parking will become hard to find as more people drive to the station and leave their cars there.
- Hopefully there will be a decrease in buses along Darling Road.
- There will be better public transport options for the area.

Q.8 Do you Support the development of the CBD Metro?

Of the business survey respondents 55% stated that they did not support the development of the CBD Metro, 27% did support the development while 18% were unsure. This can be seen in the graph below.



Q.9a Reasons for supporting the CBD Metro:

- There will be a reduction in traffic congestion as more people use the CBD Metro and other public transport services.
- There will be safer and quicker ways for people to access the City.
- There will be no more waiting at unsafe, dark, bus stops for buses that never come.
- Businesses along the network will benefit from the increased number of pedestrians.
- There will be environmental benefits as more people use the CBD Metro.

Q.9b Reasons for not supporting the CBD Metro:

- The CBD Metro will be of no benefit to areas such as Rozelle, Balmain and Lilyfield that are already well connected to the CBD by public transport.
- The costs and relatively limited scope of the CBD Metro network make no financial sense at all.
- The money would be better spent in extending the existing light rail network from Lilyfield into Rozelle and perhaps across to Dulwich.



- The money should be spent developing the heavy rail network into the growth areas of the Northwest, the Hills District and open up new affordable residential areas towards Rouse Hill and Windsor.
- The CBD Metro will be of little purpose unless it incorporates Hurstville, Bankstown, Liverpool, Parramatta, Homebush Bay, Chatswood and the Eastern Suburbs.

Q.10 Do you have any more comments about the proposed CBD Metro?

- More development in Rozelle and Balmain will see an increase the provision of shopping centres and development such as the Balmain leagues club which will detract from the area's existing village feel.
- Customer numbers will be severely impacted by an increase in traffic and lack of parking availability.
- It would be better to develop better cycling routes that link up with Metropolitan Sydney.
- The money is just better spent elsewhere.
- I think it will be great for business.
- The planned Metro Stations are well away from our business which picks up trade from light rail travellers. The completion of the proposed CBD Metro will see a reduction in passing trade to our business.



