
Westmead Millennium Institute Transport and Access

Final Report

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1 Executive Summary

1.1 INTRODUCTION

Westmead Millennium Institute (WMI) is making an application to develop a facility on Hawkesbury Road, Westmead. This will see WMI move from its current facility on Darcy Road and areas of the main Westmead Hospital buildings currently utilised by WMI.

1.2 PROJECT BACKGROUND

WMI is now looking to relocate to a purpose built research facility integrated with Westmead Research Hub, located on Hawkesbury Road. The new facility will be developed in two stages. This report (and the related development application) refers to Stage 1 only.

The Westmead Millennium Institute (WMI) is one of the largest and most productive medical research institutes in Australia, conducting world class biomedical, population health and translational research.

The Westmead Research Hub (WRH) is the major biomedical and clinical research precinct in Western Sydney. The vision of the Hub is to be a world leader in health and medical research based on globally competitive research and health outcomes, which directly benefit the Australian and Western Sydney communities and are linked to the development of a vibrant regional biotechnology and health services industry.

The vision for the Westmead Millennium Institute and Westmead Research Hub is to create a physically integrated research precinct between the adult and children's hospitals by co-locating WMI with the Children's Medical Research Institute and the Kerry Packer Building.

1.3 STATE AND LOCAL POLICIES, PLANS AND PROJECTS

State and local plans and policies support a reduction in car dependency and an increased use of public transport, walking and cycling. The Metropolitan Strategy identifies Westmead as a Specialised Centre and projects significant employment growth in the period 2006 – 2031. The State Plan identifies targets for metropolitan Sydney including the achievement of 25% mode share to public transport for the journey to work by 2016.

The recently released Metropolitan Transport Plan identifies projects that will benefit Westmead including the Western Fast Rail and the significant increase in the bus fleet. Both will increase public transport capacity through Western Sydney within a 10 year timeframe. In the longer term Westmead is identified as a station location for metro rail.

Recent work by Parramatta City Council supports the need for a reduced reliance on the private car for trips to and from Westmead if growth targets are to be attained. The existing road network cannot support the levels of growth envisaged if current levels of car use continue.

Westmead is served by rail and bus services which provide relatively good connectivity. There are direct rail services to the east (including Parramatta, Strathfield and Sydney CBD) and the west (including Penrith and the Blue Mountains). The T-way operates along Darcy Road providing high frequency bus services to the north-west (including Castle Hill, Kellyville and Rouse Hill). Other bus services provide local connections.

The walking and cycling networks are reasonable although large land uses, Toongabbie Creek, Parramatta River and Parramatta Park create barriers. The recently released NSW Bikeplan identifies priority projects in the Wentworthville, Westmead and Parramatta area including the

completion of missing links along the Parramatta Valley Cycleway and improvements to the cycleway through Parramatta Park.

1.4 WMI STAFF TRAVEL

The new WMI building will cater for 400 full-time equivalent (FTE) staff. About 20% of these are anticipated to be students. A survey of existing staff was undertaken to ascertain current staff characteristics and travel habits.

The data indicates that WMI staff (including students) have a greater propensity to use public transport, walk and cycle relative to all staff across the Westmead Health Campus. Even when students are excluded the data shows that WMI staff are less likely to drive to work and more likely to use public transport than WHC staff on average.

1.5 TRANSPORT IMPACT

In calculating the potential impact on the local area and parking requirements the following assumptions are made:

- Maintaining University of Sydney's no student parking policy. Students will not be provided with parking.
- The space currently occupied by WMI is overcrowded. The total number of staff that can be accommodated in the vacated floorspace is only 50% of current occupancy. This represents a net increase across the Westmead Hospital (including the WMI development site) of 200 FTE staff.
- The WMI development should not reduce the parking currently available by increasing demand beyond that which can be accommodated within the WMI development. That is, the status quo should be maintained.
- The Western Sydney Area Health Service will pursue a comprehensive travel demand management initiative across the Westmead Hospital site in conjunction with the planned reorganisation of parking.

It is calculated that WMI staff currently utilise 243 parking spaces across the Westmead area and of these 146 spaces will be required for staff accommodated in the floorspace vacated by WMI staff as they relocate to the new facility. This leaves 97 parking spaces that will remain available for WMI staff. In total 50 parking spaces will be provided at the new WMI development. This results in 147 parking spaces available to WMI.

The future mode share targets are defined by parking availability. The future mode share targets for non student WMI staff are:

- Car driver – 48%
- Non car driver – 52%

The new WMI development will create 50 parking spaces. Survey data indicates that 63.5% of staff arrive during the peak hour (8am – 9am). Calculations indicate the WMI development will generate an additional 32 vehicles in the peak hour. The Hawkesbury Road / Darcy Road intersection currently operates well and will continue to do so into the future despite the planned growth in the wider area. The impact of WMI on other intersections in the local road network will be less than 32 vehicles in the peak hour.

A comprehensive travel demand management plan, incorporating a monitoring and reporting program, will be put in place to ensure the mode share targets are attained.

1.6 KEY CONCLUSIONS

In total 50 new parking spaces will be provided adjacent to the new WMI building. This will be the net increase in parking provision. A further 97 parking spaces already utilised by WMI staff in the Westmead precinct will continue to be used by WMI staff.

The parking available to WMI staff in the future sets a target driver mode share at 48%. This is comparable with the target adopted by Children's Medical Research Institute (CMRI). WMI will join CMRI in leading the way in reducing car dependency across the Westmead Health Campus.

The target mode share is considered feasible based on analysis of existing staff travel patterns, home locations and potential for change. A comprehensive travel demand management initiative will be developed and resourced by WMI to ensure the identified target is met.

The WMI development will add just 32 vehicle trips to the road network in the AM peak hour.

2 Introduction

2.1 PREAMBLE

Westmead Millennium Institute (WMI) is making an application to develop a facility on Hawkesbury Road, Westmead. This will see WMI move from its current facility on Darcy Road and areas of the main Westmead Hospital buildings currently utilised by WMI. This report supports the redevelopment proposal in describing the current transport context, the future anticipated transport impacts of WMI and measures to reduce the proportion of staff driving to and from work in the future thereby mitigating any negative impact on the local transport situation.

2.2 PROJECT BACKGROUND

WMI is now looking to relocate to a purpose built research facility integrated with Westmead Research Hub, located on Hawkesbury Road. (Appendix A) The new facility will be developed in two stages. This report (and the related development application) refers to Stage 1 only.

The site of the new WMI is currently used for car parking and Westmead Hospital's transport department. The WMI development will facilitate reorganisation of the site and more efficient use, allowing the existing uses to remain alongside the new WMI building.

2.3 WESTMEAD MILLENNIUM INSTITUTE

History and Activities

The Westmead Millennium Institute (WMI) is one of the largest and most productive medical research institutes in Australia, conducting world class biomedical, population health and translational research. Established in 1996, WMI has grown rapidly and now has approaching 500 staff and students.¹ The Institute's research focus spans infectious and immune diseases; cancer and leukaemia; mental illness and liver, kidney, eye, heart and respiratory disease.

WMI is closely affiliated with Westmead Hospital and University of Sydney and research extends from the laboratory to the patient using the basic tools of molecular and cell biology, genetic epidemiology, imaging technology and clinical research.

The growth of WMI has created enormous strains on research space leading to overcrowding and dislocation of research groups into multiple locations (often separated by up to 450m) and has resulted in an inability to accept applications from leading scientists and groups to join the Institute from interstate and overseas.

Westmead Research Hub

The Westmead Research Hub (WRH) is the major biomedical and clinical research precinct in Western Sydney. The Strategic Review of Health and Medical Research² identified the need to build research critical mass to maximise synergies and economies of scale from scientific collaboration and the co-ordinated investment in and use of (shared) research infrastructure.

¹ About 400 full-time equivalents (FTE).

² Commonwealth of Australia (1998) Health and Medical Research Strategic Review - The Virtuous Cycle - Working together for health and medical research (Wills Report)

The Westmead Millennium Institute, Westmead Hospital, Children's Hospital at Westmead and the Children's Medical Research Institute recognised that they must co-operate in order to maximise collaboration and infrastructure investment, particularly in expensive platform technology capital equipment. These four founding members have now been joined by the Western Clinical School of the University of Sydney and recently affiliated members, the research division of Nepean Hospital and the University of Western Sydney.

The vision of the Hub is to be a world leader in health and medical research based on globally competitive research and health outcomes, which directly benefit the Australian and Western Sydney communities and are linked to the development of a vibrant regional biotechnology and health services industry.

Development Proposal

The vision for the Westmead Millennium Institute and Westmead Research Hub is to create a physically integrated research precinct between the adult and children's hospitals by co-locating WMI with the Children's Medical Research Institute and the Kerry Packer Building. This would be the foundation of a Research Hub precinct capable of accommodating future growth of research on campus and stimulating the development of an adjoining biotechnology precinct. The latter will be a new industry and source of employment for the 1.8m people of Western Sydney.

The building will facilitate scientific, clinical and industry collaboration and translation and the efficient development and utilisation of research infrastructure. Physical consolidation will allow high technology centres in genomics, proteomics, cell imaging, flow cytometry and animal care to be focused in one location rather than distributed over three institutes more than 700m apart. This physical consolidation will also greatly facilitate efficient utilisation of all resources by all researchers on campus and reduce duplication of large equipment still further. The core facility concept is strongly supported by all researchers and institutes on the campus.

The existing site uses include a Westmead Hospital staff car park and the hospital's transport department. The new development will facilitate reorganisation of the site including demolition of Grevillia Cottage. The reorganisation of the site will enable existing parking and transport functions to remain, accessed from the hospital's internal road network. The proposed development will remove a vehicle access/egress from Hawkesbury Road, improving pedestrian amenity in the immediate area.

2.4 TRANSPORT AND ACCESS

Due to the specialist nature of the Westmead Millennium Institute and the considerable and unrelated existing transport activity within the Westmead area it is not possible to complete a traditional traffic impact assessment in support of the redevelopment proposal. This is recognised through the Director General's Requirements (DGRs) with an emphasis on transport, accessibility and managing future travel demand.

The approach adopted focuses on minimising any future increase in car use resulting from the redevelopment of WMI. In particular it is recognised that the use of general off street and on street parking should not increase with any increased parking demand met through the redevelopment or through agreement with other parties. This will mean the development has no impact on the availability of parking for visitors to Westmead including patients and their friends and relatives.

A focus has been placed on maximising the accessibility of WMI by all modes and working through a transport management program which will see a mode shift towards sustainable transport modes and a reduced level of single occupancy car use by staff.

This report has been informed by discussions with Parramatta City Council.

3 Planning Context

3.1 INTRODUCTION

This section provides the policy, planning, transport and local development context to the transport and access strategy. It is vital the transport and access strategy recognise the various policies and plans in place and plays a part in meeting state targets relating to transport and healthcare. It is also recognised that the strategy for WMI must fit within the transport and access context of the Westmead area and specifically the Westmead Health Campus. The strategy must integrate with transport services and infrastructure.

Development of the Westmead Health Campus is ongoing. The approach to transport and access at WMI recognises the changing context and seeks to fit within it through a desire to ensure sustainability in terms of travel and access. In this way WMI will seek to reduce its impacts in line with current policy and setting an example for future redevelopments across the campus to follow.

3.2 PLANNING POLICY

The following documents, plans and policies set the context for considering transport and access to the Westmead Health Campus and WMI.

State Plan

The State Plan has identified the following target:

Increase the proportion of total journeys to work by public transport in the Sydney metropolitan region to 25% by 2016.

This target represents an average across the metropolitan region. Sydney CBD is expected to achieve a target of 75% public transport use by 2016, up from a current level of 72%. The current average across the metropolitan region is 20%.

Specialist centres, such as Westmead with rail and bus services and considerable employment density, will need to exceed 25% public transport use for journeys to work if the State Plan target is to be met. This recognises the considerable proportion of the Sydney metropolitan area which is not served by the rail network and where employment is dispersed.

Metropolitan Strategy (2005)

City of Cities: a Metropolitan Strategy for Sydney (the Metro Strategy) was released by the Department of Planning (DoP) in November 2005. It provides a framework for the development of Sydney over the next 25 years, with the aim of achieving economic, social and environmental sustainability.

The philosophy of the Strategy is to manage growth by a combination of consolidated development at existing urban centres and transport nodes with infrastructure capacity, or where infrastructure can be provided, and limited but carefully planned greenfield development.

The Metropolitan Strategy strategic framework is supplemented by a series of subregional plans, developed by the DoP with input from councils. The subregional plans provide finer detail of jobs and residences, aligned to accessibility, infrastructure and capacity. The Westmead Health Campus is located in the Parramatta City LGA, which is part of the West Central sub-region along with Auburn, Bankstown, Fairfield and Holroyd LGAs.

A hierarchy of centres is adopted which, in theory, will guide investment and policy decisions of government and private sectors. Sydney/North Sydney is identified as the dominant “Global City” centre, with Parramatta, Liverpool and Penrith performing “regional city” roles. Westmead is identified as a Specialist Centre and as such nominated as a focus for investment. The Metropolitan Strategy forecast growth from 13,300 jobs in 2001 to 20,000 jobs by 2031.

The Metropolitan Strategy recognises that existing and new infrastructure investment in identified centres and corridors will be used more efficiently by concentrating new development in these areas to support their primary role. The continued role of Westmead as a specialised centre focused on healthcare is strongly supported.

The government has recently released *Sydney Towards 2036*, the first step in a review of the Metropolitan Strategy. The review will ensure the Metropolitan Strategy addresses challenges such as the Global Financial Crisis, expected population forecasts, housing affordability and climate change. The discussion paper re-emphasises the need for land use and transport integration and recognises that more needs to be done beyond those actions identified in the Metropolitan Strategy.

Metropolitan Transport Plan (2010)

The Metropolitan Transport Plan was released in early 2010. It sets out a 10 year fully funded transport strategy for the Sydney Metropolitan area that is fully integrated with the Metropolitan Strategy, released in 2005. The Metropolitan Transport Plan identifies a number of relevant projects in the 10 year funding guarantee:

- Western Express – the extension of the Main West tracks from Central Station through the city with new underground stations at Redfern, Railway Square, City West and Wynyard facilitating the separation of the Main West, North, South and Inner West Lines and facilitating additional services on each. This will provide 5,000 additional seats from Parramatta in the peak hour.
- Improved bus connectivity – completion of the remaining works on the 43 strategic bus corridors including the two Transitways. This will see the planned implementation of bus priority on the Parramatta – Rouse Hill T-way and the extension of the strategic bus corridors into the North West Growth Centre. In addition 1,000 new buses will be added to the fleet serving Sydney.
- Off-road cycle network – construction of the missing links in the Sydney Metropolitan Strategic Cycle Network.

Although not currently part of the 10-year plan, a metro rail corridor from Central Station to Westmead has been identified. Metro rail would serve areas that currently do not have direct rail services to Westmead including Broadway and Camperdown, the Inner West, Sydney Olympic Park and Silverwater. Metro would significantly increase the rail capacity to Westmead and provide a greater level of rail connectivity.

The Parramatta to Epping rail link should also be noted. Again the project is not currently on the 10 year plan but does remain part of the State’s longer term project portfolio and may be brought forward for immediate construction. The Parramatta to Epping rail link would see the existing Carlingford Line duplicated and connected directly to Parramatta in the south and Epping in the north, joining the Epping to Chatswood rail link. This would offer much improved rail connectivity to the north shore suburbs, Macquarie Park and North Ryde.

Both the metro network and the Parramatta – Epping rail link are identified as projects that could be brought forward if funding becomes available.

State Health Plan – Towards 2010 (2007)

The State Health Plan – Towards 2010 addresses the challenges faced by the NSW health system using seven Strategic Directions that focus on priority programs.

The NSW Health Vision is “Healthy People – now and in the future”. An active transport network that supports walking and cycling, alone or in combination with public transport, has the potential to significantly contribute to achieving this vision.

Access Equity is a central tenet of the State Health Plan, defined as; *“Everyone should have fair access to health information and health services that are affordable, timely and appropriate to their needs. Help should be provided to people who experience difficulties with access.”*

‘Access Equity’ in part, is dependent on equal access for all members of the community regardless of car ownership or access to a vehicle, ability to drive, income and disability. Accessibility is dependent on the provision of safe, legible and negotiable pedestrian environments that link with public transport and surrounding residential areas.

Access equity can be equally applied to employment opportunities and Westmead Health Campus (WHC), including WMI, as a workplace should be accessible by a range of modes.

In addition the State Health Plan identifies initiatives to reduce risk factors including obesity, with the aim of ‘encouraging people to be more active and less sedentary’. Recognising the importance of protective factors the State Plan commits to ‘work with other agencies to support urban planning measures that promote improved physical and mental health, safer environments and provide more opportunities for recreational, arts and cultural activities, including more parks, sporting facilities, bicycle ways and walking paths.’

3.3 FUTURE DEVELOPMENT STRATEGY (FDS)

NSW Health completed the Future Development Strategy (FDS) for the Westmead Health Campus (WHC). The FDS provides a framework for the continuous development of WHC from 2008 to 2021. It aims to deliver outcomes consistent with Health’s strategic objectives and identifies opportunities for private sector participation in the delivery of infrastructure.

The Future Direction Report (attachment 1 of the FDS) identified a number of accessibility issues including:

- Significant distance between facilities with little provision for people movement;
- Uncertain locality definition, way finding and little sense of arrival;
- Lack of public permeability and inadequate car parking facilities;
- Very little staff, patient, carer and visitor amenity;
- No internal access to public transport;
- Lack of connectivity with Parramatta including inadequate public transport access; and
- The physical barriers created by the T-way and by Toongabbie Creek/Parramatta River.

The FDS forecast a 30% expansion of health care services at Westmead between 2006 and 2021 with a commensurate growth in staff to 11,000 (from 8,000 in 2006) and a need for additional car parking. The FDS suggests an additional 2,500 to 3,000 car parking spaces will be required by 2021.

While it is not possible for WMI to unilaterally address these issues, it does recognise its own role in encouraging a reduction in car use and a corresponding increase in the use of alternatives. Increased use of public transport and walking and cycling facilities will contribute

to the establishment of a virtuous cycle of improvement. The redevelopment of WMI will contribute to the solution.

3.4 PARRAMATTA LGA TRANSPORT POLICY

Parramatta City Council recently adopted an Integrated Transport Plan for Parramatta City Centre. While this plan only addresses Parramatta CBD and immediate environs, it demonstrates the City Council's commitment to encouraging a transport future based on sustainable modes and a reduced reliance on private cars. Given the proximity of Westmead to Parramatta CBD it is also likely that initiatives identified in the Integrated Transport Plan will positively impact Westmead.

Parramatta City Council has also completed the Westmead Integrated Transport Strategy. Although not formally adopted by Council this strategy identifies the problems the Westmead precinct will face if forecast growth is realised without a mode shift away from car use. The road network serving Westmead Precinct will essentially reach gridlock conditions in the peak periods with a dramatic reduction in average vehicle speeds. Traffic modelling demonstrates that the existing road network cannot cope with additional growth in traffic levels during peak periods.

To accommodate growth within the capacity of the existing road network the Strategy proposes a mode shift away from car use, with a corresponding increase in more sustainable options including rail, bus, walking and cycling.

4 Transport and Traffic Context

4.1 INTRODUCTION

Westmead is relatively well served by public transport with rail, T-way and bus services. The road network tends to be congested, particularly at peak periods during the week. Anecdotal information suggests that congestion is worse on Tuesdays, Wednesdays and Thursdays in conjunction with scheduling of out patient clinics. These are also the times when there is maximum demand for parking within the area.

The Westmead Transport Access Guide (TAG) provides a comprehensive summary of transport services.

Westmead Health Campus has four main gateways:

- Hawkesbury Road as the main entrance for Westmead Hospital and Children's Hospital Westmead, including CMRI;
- Institute Road which provides primary access into Westmead Health Campus and Redbank School;
- Redbank Road which provides access into the Health Campus from the north; and
- Bridge Road, which links Cumberland Hospital with the main Health Campus.

4.2 PUBLIC TRANSPORT

Rail

Westmead Health Campus is located close to Westmead Railway Station, which is located approximately 700 metres from the new WMI site, well within a 10 minute walk time.

Westmead is serviced by the Western, Cumberland and Blue Mountains Lines. The Western Line runs from North Sydney to Emu Plains/ Richmond via Parramatta. The Cumberland Line runs from Campbelltown to Blacktown via Liverpool. The Blue Mountains Line runs from Central to Lithgow via Penrith.

The Western Line interchanges with the Carlingford Line at Clyde. The Western Line interchanges with the Northern, Inner West and South lines at Strathfield and with the North Shore line at Hornsby. Interchange between the Western Line and the Eastern Suburbs, Bankstown and Airport Line can be made at Central. There is no direct interchange between the Northern Line and the Cumberland and Carlingford Lines.

Westmead Station has good facilities. Westmead Station underwent a \$4.1 million Easy Access upgrade in 1995 and is therefore fully accessible with lifts, tactile paving, wheelchair-accessible car spaces and a wheelchair-accessible toilet.

Facilities include:

- Wheelchair Access (including lifts to platforms)
- Kiosk selling newspapers, snacks and drinks
- Ticket windows and machines
- Bus stop nearby, taxi rank and kiss and ride bays
- Car parking

The service frequency during the week and at weekends is outlined in Table 4-1 below. Westmead is currently the third most frequently serviced station in the Parramatta LGA.

Table 4-1 – Train Services at Westmead Station³

Western Line										
	Emu Plains/Richmond to Chatswood					Chatswood to Emu Plains/Richmond				
	1 st train	Last train	Number of services			1 st train	Last train	Number of services		
			AM peak	PM peak	All day			AM peak	PM peak	All day
Weekday	3:37	23:47	29	26	135	4:48	00:51	30	25	132
Weekend	4:31	00:30	15	16	93	5:27	00:42	7	15	82

Cumberland Line										
	Campbelltown to Blacktown					Blacktown to Campbelltown				
	1 st train	Last train	Number of services			1 st train	Last train	Number of services		
			AM peak	PM peak	All day			AM peak	PM peak	All day
Weekday	7:36	8:06	2	0	2	16:46	17:46	0	3	3
Weekend	No service					No service				

Blue Mountains Line										
	Lithgow to Central					Central to Lithgow				
	1 st train	Last train	Number of services			1 st train	Last train	Number of services		
			AM peak	PM peak	All day			AM peak	PM peak	All day
Weekday	5:32	20:24	3	1	16	5:47	16:23	0	1	11
Weekend	6:00	00:30	3	4	19	9:47	17:47	0	2	9

³ Number of services in the morning peak period (0700-1000), evening peak period (1600-1900) and all day (24 hours).

Total through Westmead Station

	To Sydney CBD					From Sydney CBD				
	1 st train	Last train	Number of services			1 st train	Last train	Number of services		
			AM peak	PM peak	All day			AM peak	PM peak	All day
Weekday	3:39	23:40	34	27	153	4:46	00:46	30	29	146
Weekend	4:31	00:30	18	20	112	5:26	00:41	7	17	91

Bus

Access to the Westmead Health Campus was improved by the construction of the North-West T-way in 2007. The North-West T-way was built to provide fast frequent and convenient bus services for the north-west Sydney Region. The North-West T-way extends from Parramatta to Rouse Hill.

Details of route and service levels for the Westmead Health Campus are provided schematically in Figure 4-1. The North-West T-way route and stops are shown in Figure 4-2.

Westmead is reasonably well served by buses. On weekdays, 10 routes stop at the Westmead T-Way Station, with approximately 260 buses per day in each direction. Approximately 45% of these services run during peak time.

The buses have varying levels of service, and 7 of the bus routes which stop at Westmead Station are T-way Buses. Four T-way routes run between Parramatta and Rouse Hill, two between Parramatta and Castle Hill and one between Parramatta and Blacktown.

On Saturday and Sunday the number of routes serving the area is reduced to 8, of which 6 are T-way buses. Approximately 120 buses run in each direction on Saturdays, whilst slightly less than 100 buses run each way on Sundays.

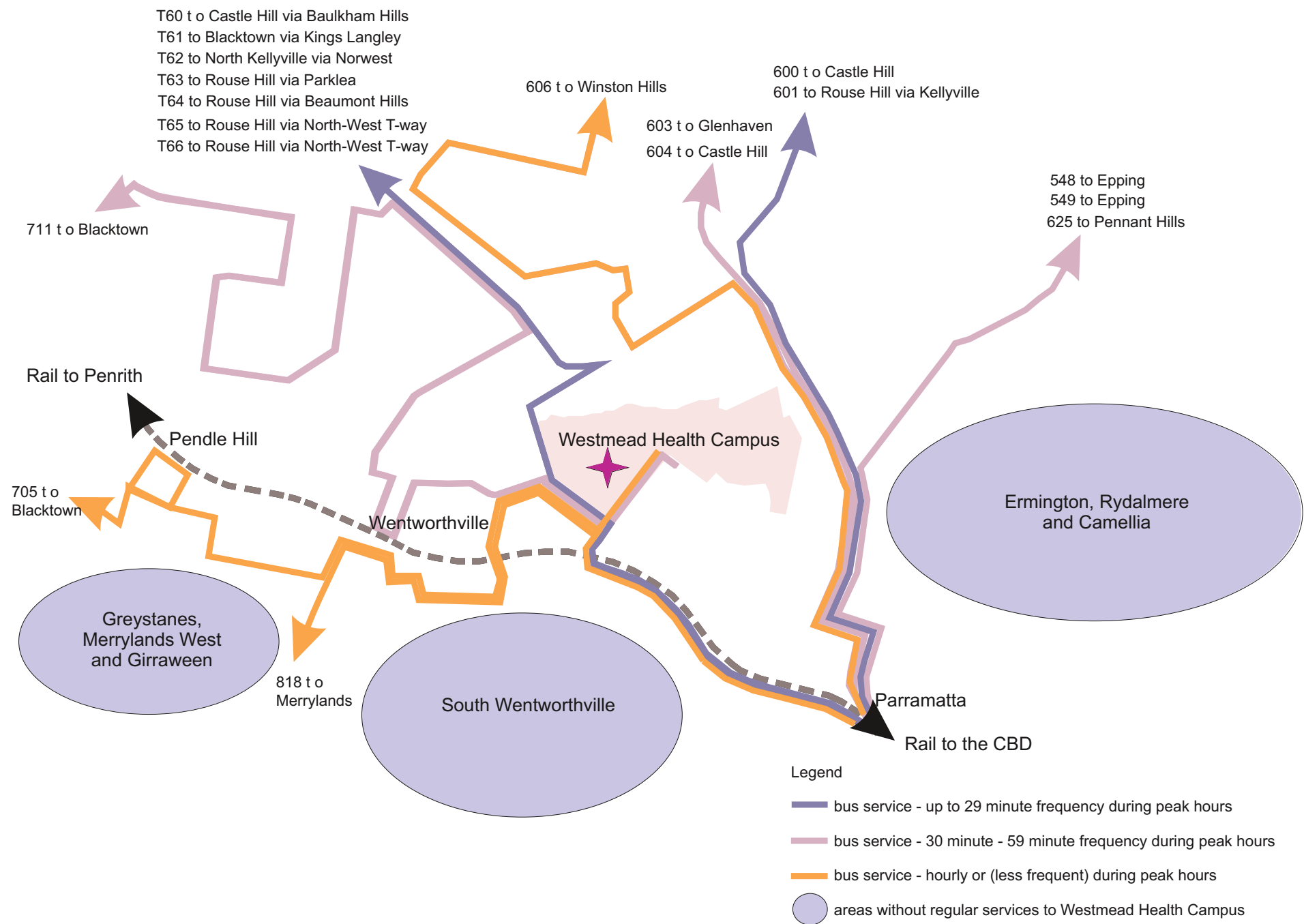
The bus frequency analysis below shows that Westmead Health Campus is fairly well served during the morning (7am to 10am) and evening (4pm – 7pm) peak periods from Monday to Friday. Weekend and evening services are somewhat more limited, especially on Sundays.

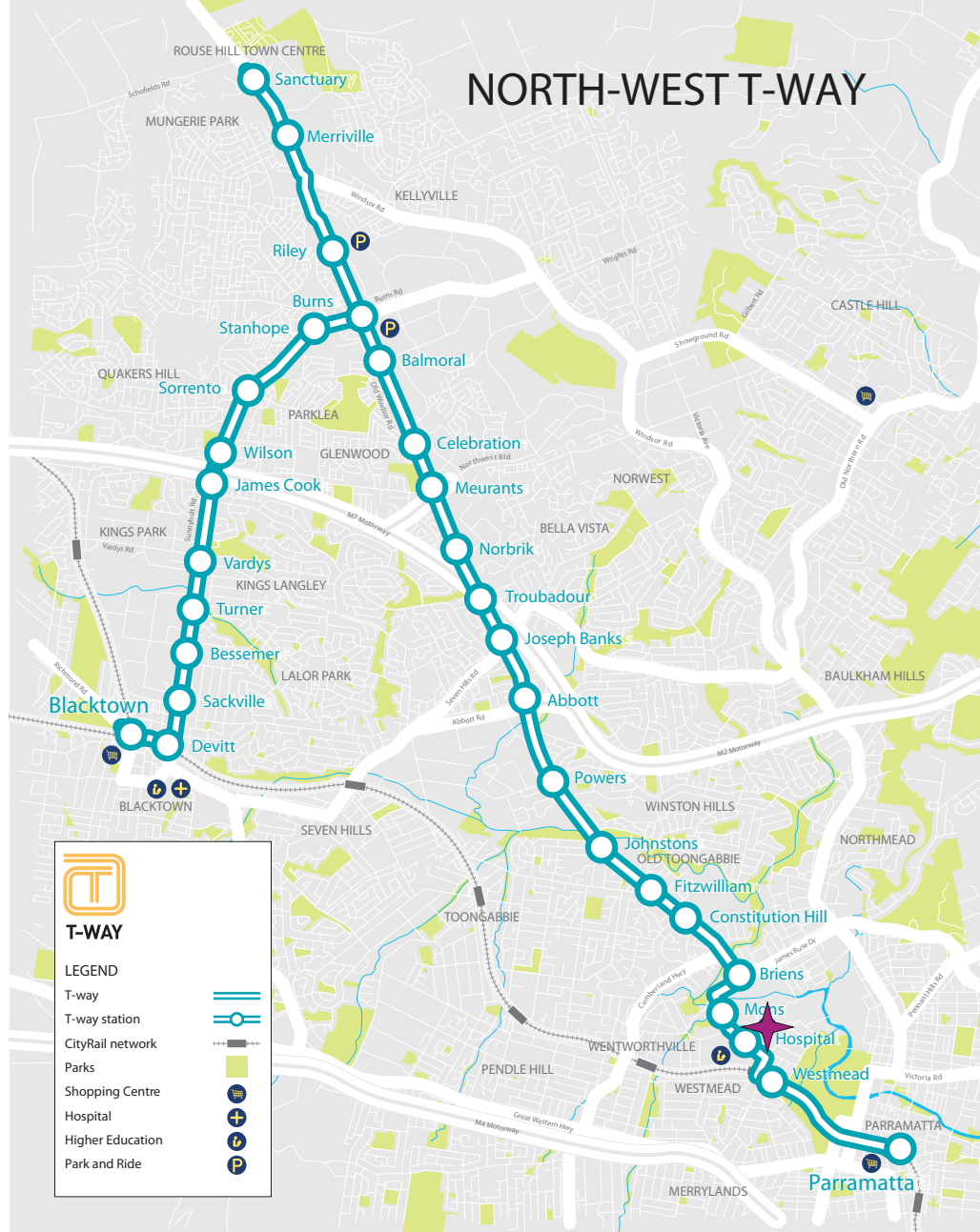
Taxis

Westmead rail station has a taxi rank and there is a taxi rank on Hawkesbury Road between the new WMI site and the entrance to Children's Hospital Westmead. Direct taxi phones are provided at each major hospital entrance, including emergency, outpatients and dental school entrances and the main entrances. Given the level of activity at the Westmead Hospital Campus, adjacent land uses including University of Western Sydney and the proximity of Westmead to Parramatta, taxis are generally available at Westmead.

Community / Hospital Transport

Given the nature of travel to and from WMI community/hospital transport is not relevant in this case. WMI does not run any employee specific transport services.





4.3 WALKING

All the streets around Westmead Hospital Campus have footpaths and there are pedestrian crossings at Hawkesbury Road / Darcy Road and Hawkesbury Road / Railway Parade. Generally the street network provides good levels of pedestrian accessibility. Traffic islands along Hawkesbury Road facilitate informal pedestrian crossing. Walking paths through Parramatta Park provide access to Parramatta.

Residential areas close to WMII are easy to walk through with adequate footpaths and traffic management measures that limit through traffic. Plans to develop Westmead Hospital Campus in the future will see pedestrian facilities improved with particular proposals to improve the linkage between Westmead Station, Westmead Hospital entry and Children's Hospital entry, via the T-way stops on Darcy Road through the provision of a continuous walkway negating the need to cross Hawkesbury Road and Darcy Road at grade. The continuous walkway would run parallel and slightly to the north of Hawkesbury Road, passing the proposed WMI site.

4.4 CYCLING

There are relatively few dedicated cycle route facilities in and around the Westmead Health Campus with existing facilities focused on Parramatta Park. Parramatta City Council has prepared the Parramatta Bike Plan 2009.

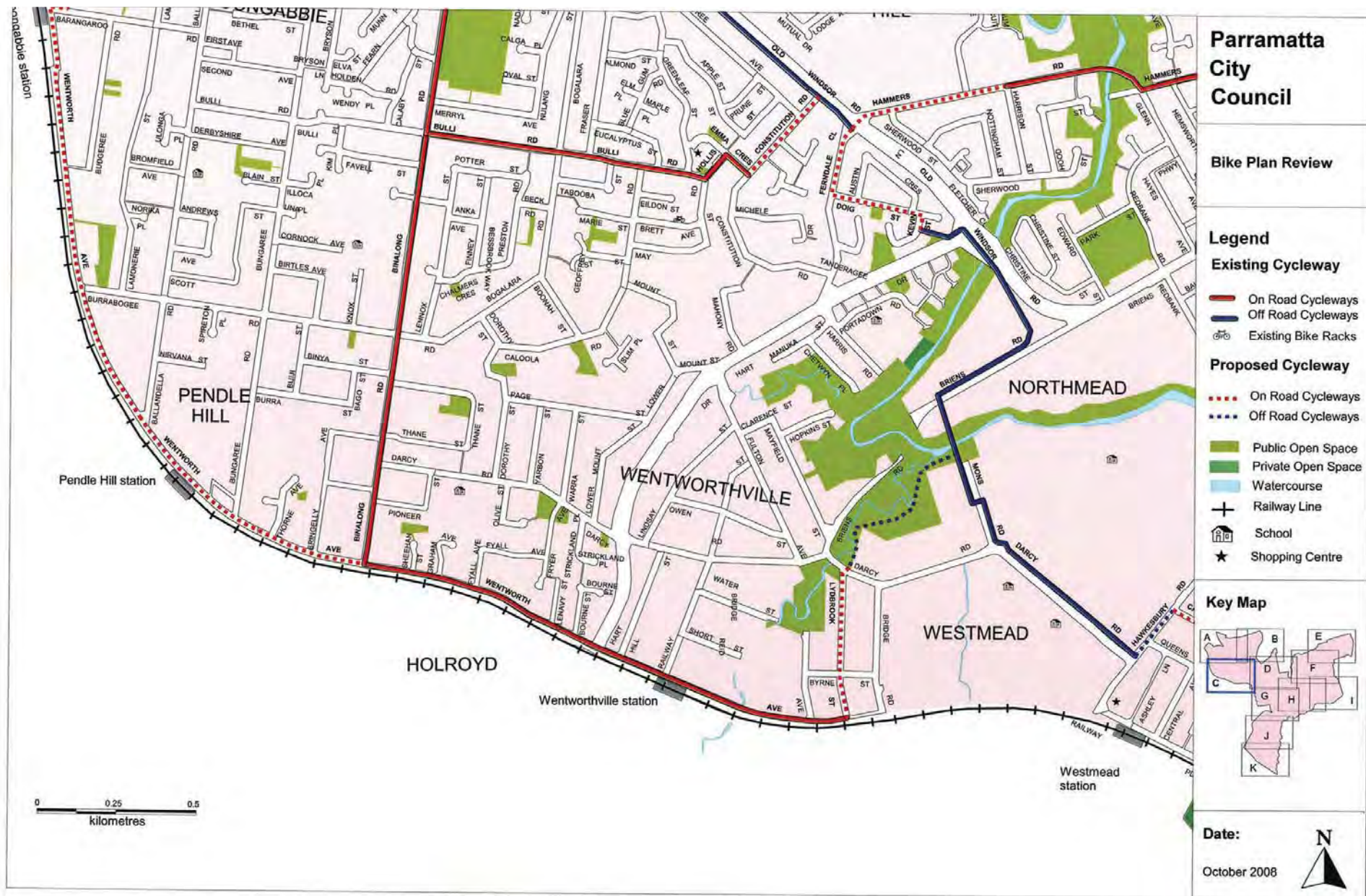
Current cycle paths to and from the Health Campus are limited. A bi-directional off road path has been provided adjacent to the T-way, however, a section adjacent to the elevated T-way between Cumberland Highway and Ferndale Close is currently missing and leaves cyclists to make a detour via local streets. The draft Parramatta Bike Plan identifies the missing section and proposes an on road facility.

There is a nearby cycleway through Parramatta Regional Park which runs on-road along the periphery of the park effectively connecting Westmead with Parramatta CBD. This path links to Hawkesbury Road in the vicinity of the proposed WMI site via Caroline Street, although Jessie Street provides an easy and more direct link to the new WMI building.

Four bike lockers are located at Westmead Station.

The Parramatta Bike Plan also proposes an off road facility through Milson Park to Lydbrook Street and Wentworth Avenue, connecting to Wentworth, Pendle Hill and Toongabbie. (Figures 4-3 and 4-4)

The 2010 NSW Bikeplan identifies priority projects in the Wentworthville, Westmead and Parramatta area including the completion of missing links along the Parramatta Valley Cycleway and improvements to the cycleway through Parramatta Park. (see below)





4.5 ROAD

Road access to the Westmead Health Campus is via Darcy Road from the west and Hawkesbury Road from the south. Direct access from the north and east is limited by Cumberland Hospital and Parramatta Park, respectively.

Local roads around the Campus which are highly significant for the Health Campus include Hawkesbury Road, Redbank Road and Institute Road. WHC lies just to the south of the intersection of Cumberland Highway and Old Windsor Road. Old Windsor Road/Cumberland Highway provides a connection between the M2 and M7 to the north and M4 and Great Western Highway to the south.

O'Connell Street, which is adjacent to Church Street, a main road leading to Parramatta, provides a connection to the east of WHC. This does not provide road access to WMI but does offer cycle and pedestrian access via Cumberland Hospital.

Darcy Road has three signalised crossings along the length of the Health Campus, including at the intersection of Darcy Road and Hawkesbury Road.

A painted median and traffic islands along Hawkesbury Road to the north-east of the intersection with Darcy Road assist pedestrians crossing the road, including within the vicinity of WMI.

4.6 PARKING

Supply

Westmead Health Campus currently has 9 car parks for Westmead Hospital and 3 car parks for Children's Hospital. WMI provides some parking for staff and visitors on land immediately adjacent to the existing building. This parking is allocated on a needs basis, including visitors, technicians and visiting VIPs.

WMI staff have access to the following off street parking by arrangement:

- Adjacent to WMI 9 spaces (free)
- Adjacent to Brian Dynamics 13 spaces (free)

A reorganisation of the off street car parking serving the Westmead Health Campus (WHC) is planned, including the demolition and rebuilding of some car parks. This will result in changes in the parking access and management arrangements for staff, visitors and patients.

The total amount of car spaces within the Campus is around 5,800. These parking spaces are currently spread through a number of parking areas. A breakdown is shown in Table 4-2 below.

Table 4-2 - Current number of car spaces within Westmead Health Campus by component⁴

Component	Spaces
Staff	3,673
Shared	1,387
Patients only	175
Internal on-road spaces	650
Total	5,885

The main public car parks on the Campus are on Hawkesbury Road (two) and off Hainsworth Street serving the Children's Hospital. Public car parks have an effectively full occupancy during core weekday hours. WMI staff are permitted to use Westmead Hospital staff parking if they have a staff permit (allowing boom gate access). Future planned development will reorganise parking supply at Westmead Hospital to improve access and efficiency.

In addition to hospital provided parking, there is also a temporary commercial car park (operated by Wilsons) at the corner of Darcy Road and Hawkesbury Road on land owned by University of Western Sydney. The car park is located on a development site and while there is no current development proposal the car park will be removed when development progresses.

On street parking in the residential area to the east of Hawkesbury Road is subject to additional restrictions with the introduction of residents only parking on approximately half the street space. Non residents can park in restricted spaces for up to 2 hours. On street parking is also available in the Redbank Road area, directly to the north of WHC and these streets are not subject to additional controls.

Parking supply is shown on Figure 4-5.

⁴ Urbis JHD (2006) Commercial Demand Study, Table 10 page 31, in: Appendix 3 of the FDS, Evans and Peck, 2006.



Parking Charges

Hawkesbury Road Car Park (WH3) has flat rate of \$8 per entry with no time limit, meaning that a stay in the car park can be anything from 5 minutes to 5 days and beyond. Westmead Hospital staff (including WMI staff) can purchase a staff parking permit for \$2.50/week (salary sacrifice). The parking permit allows staff access to staff parking areas (protected by boom gate controls) but there is no limit on the number of permits issued and there is no guarantee of finding a space. Anecdotal evidence suggests Westmead Hospital staff parking reaches capacity early in the morning and illegal parking is commonplace.

WMI can also utilise casual (visitor) parking at the Children's Hospital although survey data indicates that no staff choose to do so at the current time.

Staff Children's Hospital (CH1) casual (visitor) parking charges are shown in Table 4-3.

Table 4-3 - Children's Hospital Staff Car Parking Charges⁵

Time	Charge
1st hour	\$4
1 -2 hours	\$6
2 to 3 hours	\$8
3 hours plus	\$12

The various parking access and charging arrangements across the Westmead Health Campus do not necessarily support a coordinated approach to reducing car use, however, it is likely that there will be an increasingly consistent approach to staff parking access and charges across the Health Campus in the future.

The Wilson's car park charges at a flat rate of \$5 per day.

4.7 FUTURE TRANSPORT PROVISION

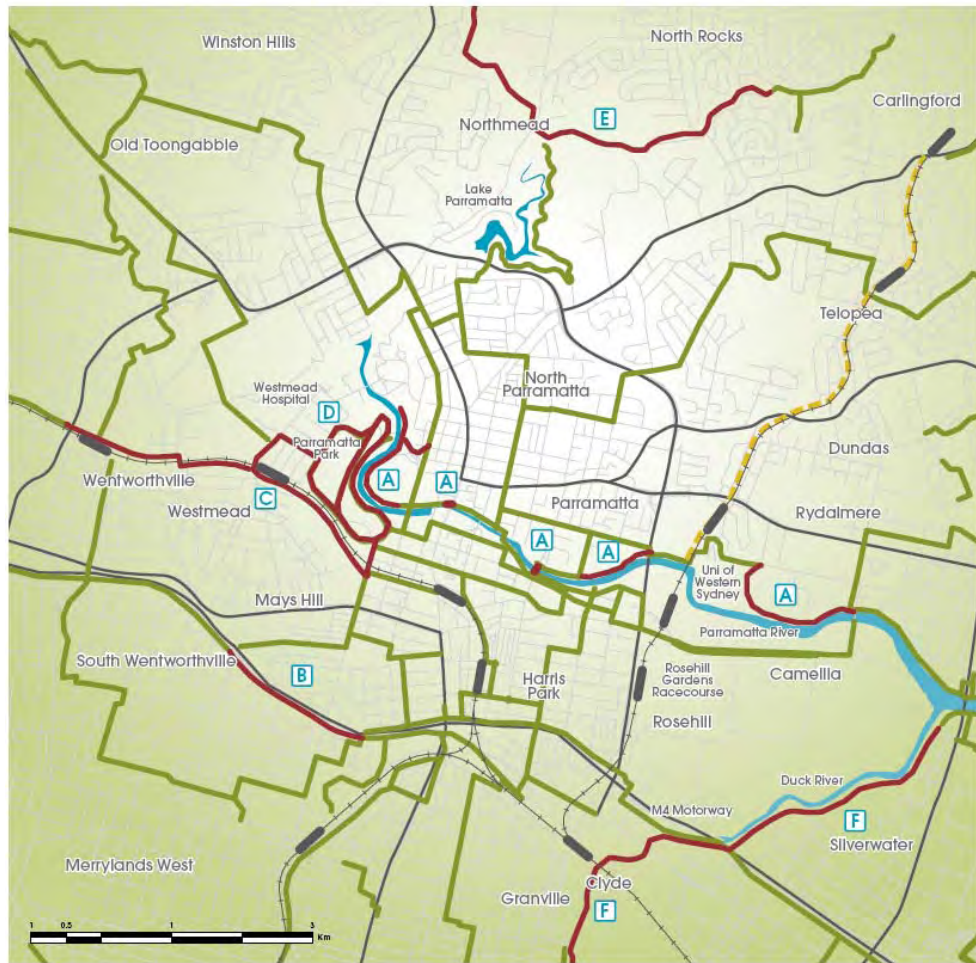
The State Government has recently released its Metropolitan Transport Plan. Submissions closed on the 28 May, 2010, and the Plan has not yet been formally adopted.

A number of potential transport infrastructure projects may improve the road and rail access to Westmead. Of these, the City Relief Line, and the Western Express Services it would allow, is one of the most relevant projects. The proposed introduction of up to 1,000 buses on strategic bus corridors is also likely to improve access to Westmead. Both these initiatives will increase public transport capacity in Western Sydney including in the vicinity of Westmead.

The NSW BikePlan aims to transform cycling and encourage more frequent and safer riding in NSW. A ten-year \$78 million River Cities Bike Program will provide improved cycle routes and facilities in Parramatta, Liverpool and Penrith. Works in Parramatta will include connecting the CBD to Westmead through Parramatta Park.

⁵ Urbis JHD, 2006, Commercial Demand Study, in: Appendix 3 of the FDS, Evans and Peck, 2006.

Figure 4-6 - Parramatta Subregional Bike Network (NSW BikePlan)



Priority projects

- A** Parramatta Valley Cycleway missing links
- B** M4 Regional Cycleway missing link
- C** Parramatta to Westmead and Wentworthville
- D** Parramatta Park improvements
- E** Western Hills District cycleway
- F** Duck River cycleway
- G** Liverpool to Campbelltown Rail-Trail
- H** Liverpool western subregional connections
- I** Liverpool eastern subregional connections
- J** Penrith to Emu Plains
- K** Victoria Bridge investigations
- L** Penrith to Regentville - Mulgoa Road shared path
- M** Penrith to St Marys - Great Western Highway shared path
- N** Penrith eastern subregional connections
- O** Penrith South to Castlereagh

- Existing cycleway
- Proposed Metro Sydney Bike Network
- Priority River Cities Subregional Bike Network
- Local street network
- State road network

5 Existing Travel Demand

5.1 INTRODUCTION

To assist in understanding WMI staff and their current travel habits, staff were asked to complete a short questionnaire (Appendix B). The survey was completed during June 2010. In total 243 questionnaires were returned. While the total number of staff at WMI fluctuates depending on the number of students, at the time of the survey there were around 480 staff and this indicates that some 50% of staff completed a questionnaire.

5.2 STAFF CHARACTERISTICS AND TRAVEL

There are currently around 480 staff at WMI. The number of staff fluctuates depending on the number of research students and the status of their studies. No staff are actually employed by WMI, with the majority of staff being employed by University of Sydney. This leads to relatively fluid arrangements which can see staff combining teaching, research and clinical duties.

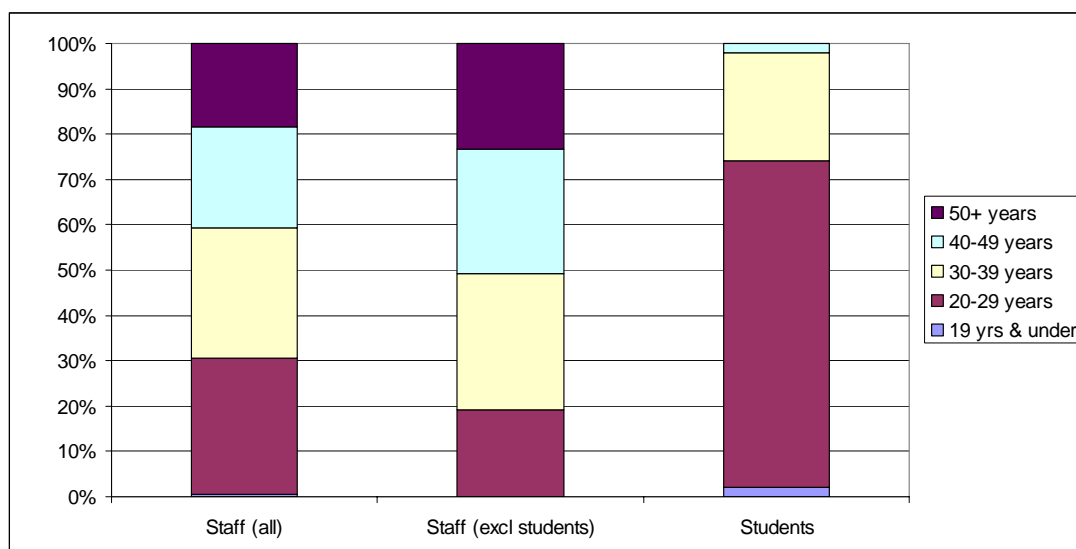
Two-thirds (67%) of WMI staff who responded to the survey are female and this will impact travel choices in a number of ways.

One-fifth (20%) of respondents indicated they are a student. Most commonly students are completing PhD research.

WMI staff are relatively young with 59% of respondents aged 39 years and under. This is influenced by the presence of a relatively high proportion of students. The remaining 41% of respondents are aged 40 years and over.

As can be seen the majority of students fall in the 20-29 years age bracket.

Figure 5-1 – WMI Staff Age Profile



In terms of the length of employment with WMI, a third of respondents have been with WMI less than 2 years (30%) and again this is influenced by responses from students, 50% of whom responded that they had been with WMI less than 2 years. At the other end of the spectrum, 15% of respondents have been with WMI for 10 years or more, and 5 of these people reported being with WMI for 20 years or more.

WMI staff live throughout the Greater Sydney area (Appendix C), however, there are discernable clusters in the local area and the Inner West, probably due to the dual influences of:

- Staff locating over time to be near their place of employment.
- The nexus between University of Sydney located at Camperdown and WMI, particularly for students.

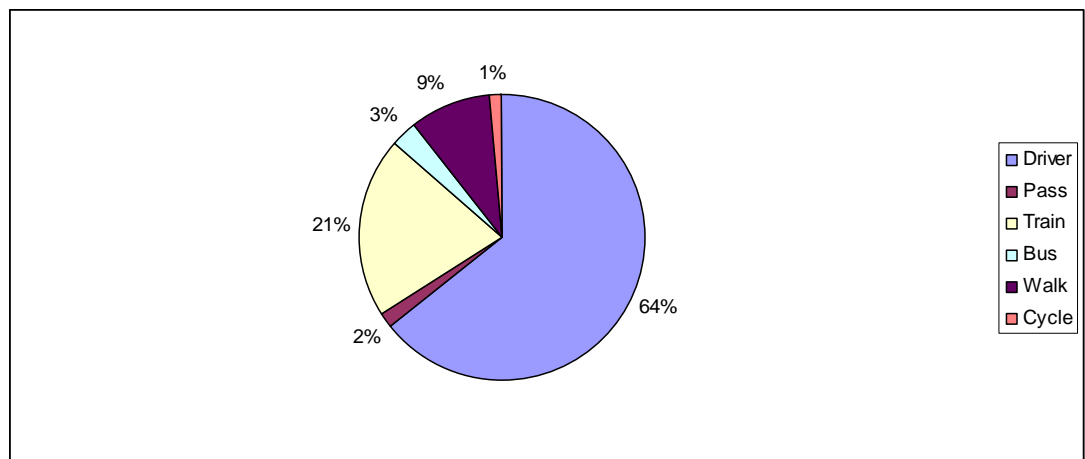
Respondents living in the Westmead area are likely to walk to work and those in the Inner West favour the train.

Existing Travel Patterns

Journey to Work (JTW) data collected at the 2006 Census was analysed to provide comparative data and establish relative performance of WMI in terms of staff travel to the Westmead area. All JTW trips with a destination in Travel Zone 1693 were included. Travel Zone 1693 encompasses the Westmead Hospital Campus (Westmead Hospital, Children's Hospital at Westmead), collocated research facilities including WMI, CMRI, Redbank School and the DADHC site on Mons Road. The Census category 'did not travel / worked at home' was excluded from the analysis to provide a comparable data set.

Considering a single travel day and excluding the respondents who did not work on that day, 64% drove to work, 2% travelled as a car passenger, 21% travelled by train and 9% walked to work.

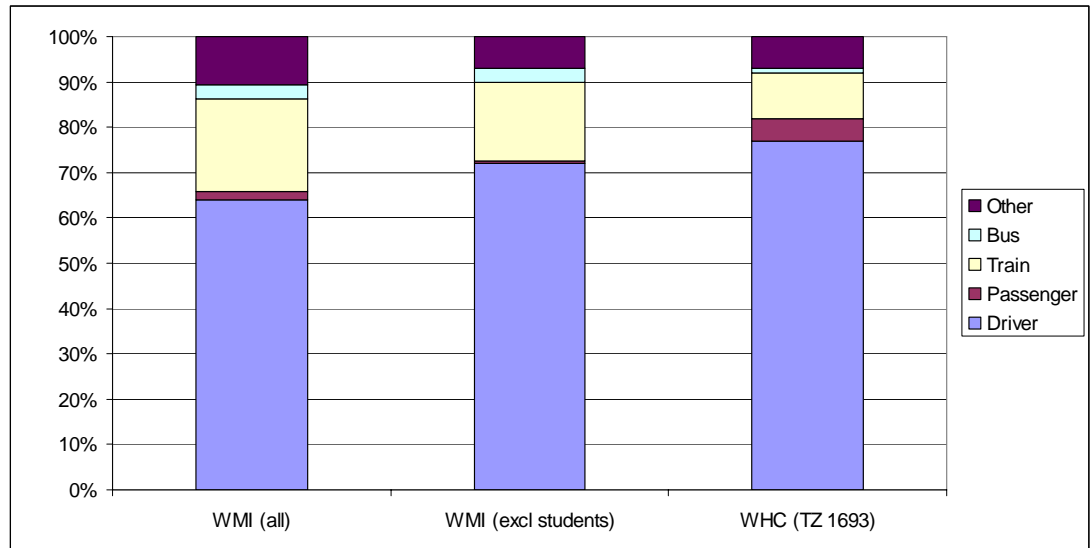
Figure 5-2 – WMI Staff (including students) Single Day Mode Split



Journey to work (JTW) data collected at the 2006 Census was analysed to provide comparative data and establish relative performance of WMI in terms of staff travel to the Westmead area. All trips with a destination in Travel Zone 1693 were included. Travel Zone 1693 encompasses Westmead Hospital Campus (Westmead Hospital and Children's Hospital at Westmead), collocated research facilities (including WMI), Redbank School and the DADHC site on Mons Road. The Census category 'did not travel/worked at home' was excluded from the analysis to provide a comparable data set.

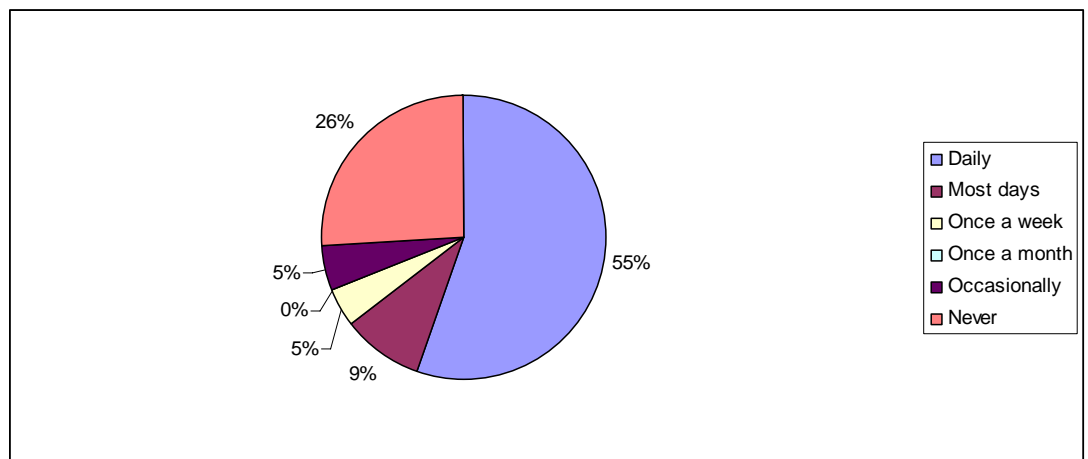
The data indicates that WMI staff (including students) have a greater propensity to use public transport, walk and cycle relative to all staff across the Westmead Health Campus. A third of students (33%) reported driving and a third (33%) reported using the train. Even when students are excluded the data shows that WMI staff are less likely to drive to work and more likely to use public transport than WHC staff on average.

Figure 5-3 – WMI Staff (including and excluding students) and WHC JTW Single Day Mode Split



Of the respondents, 55% indicated they drive every day and a further 9% reported they drive on most days. Just over one-quarter (26%) indicated they never drive.

Figure 5-4 – WMI Staff (including students) Frequency of Car Use (as driver)



Train use is much more prevalent than bus use. Of the respondents 16% indicated they use the train every day and 5% use it on most days. In total 37% of respondents reported using the train at some point, even if only occasionally, and this indicates that a relatively high proportion of staff can use public transport to travel to Westmead. Some respondents did, however, indicate that while feasible public transport does not compete well in comparison with a car trip from the same location:

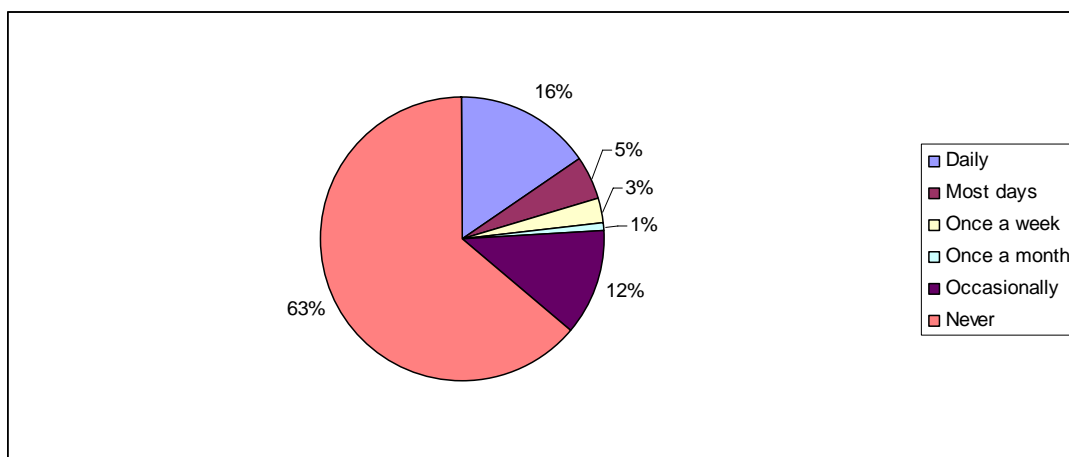
For the first 10 months last year I caught 1 bus plus 2 trains each way taking me about 90 minutes each way. Because the journey is long, fragmented and the trains are filthy on the Western Line I now choose to drive outside peak hour every day.

Others indicated their frustration at the lack of public transport availability:

If there were trains timetabled from the Inner West I would definitely use them.

I need to drive to work and park unless Sydney's public transport improves considerably.

Figure 5-5 - WMI Staff (including students) Frequency of Train Use



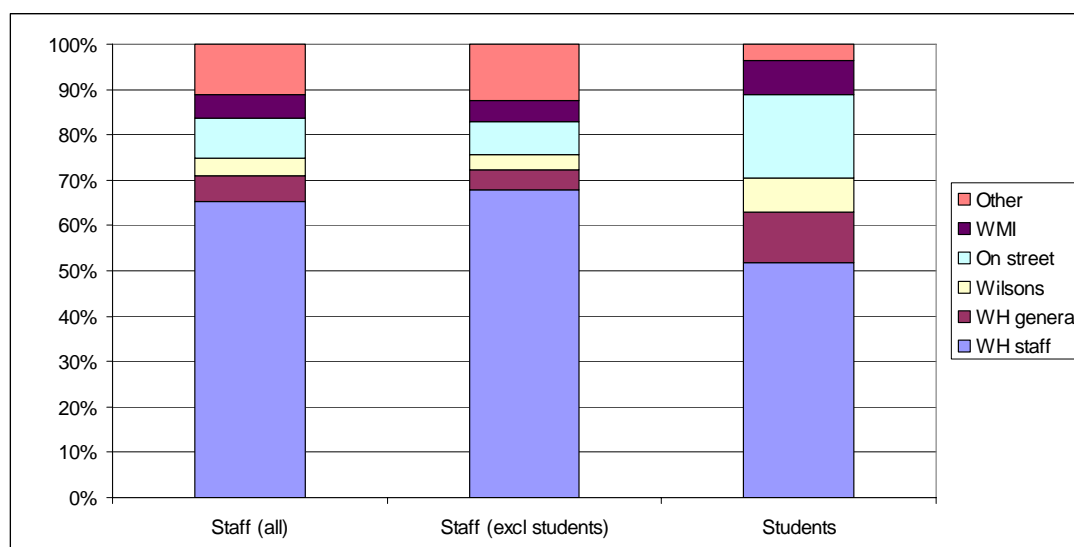
Car Parking Locations

WMI staff who drive indicated they find parking at a variety of locations across the Westmead area. Of the staff who drive, 65% indicated they use Westmead Hospital staff parking, 10% use casual paid parking (Westmead Hospital or Wilsons), 9% park in local streets and 5% use WMI provided parking. The remaining 12% indicated they park in other locations. Some responses included comments such as:

Wherever I can!!!

Currently at friend's visitors' car park across on Caroline Street.

Figure 5-6 - WMI Staff Reported Parking Locations



Cycle Parking Locations

Currently only a very small number of WMI staff cycle – just 2% of respondents indicated their preferred mode as cycle. WMI does not provide any dedicated cycle parking and facilities are limited. Cycle parking for those that do cycle is understood to be ad hoc and opportunistic.

Working Hours

Survey responses indicated that WMI staff arrive at work over a broad time period, as may be expected at a research institution, however, 63.5% of respondents arrived between 8am and 9am in the morning with a further 16.2% arriving between 7am and 8am. Anecdotal evidence suggests that the local pressure on parking supply encourages staff to arrive early in order to find a parking space.

Most respondents (70%) indicated they leave work between 4pm and 6pm, with 19.1% leaving between 4pm and 5pm and a further 51.9% leaving between 5pm and 6pm.

5.3 CONCLUSIONS

WMI staff have a greater propensity to use public transport, walk and cycle to work than the broader Westmead Health Campus workforce. Analysis of staff home locations suggests there is considerable opportunity to further reduce car driver mode share.

Staff tend to work regular hours, Monday to Friday. While there are some exceptions, most staff work hours that are compatible with typical public transport service provision.

6 Transport Impact

6.1 INTRODUCTION

It is not considered appropriate to utilise the trip generation rates given within the RTA's Guide to Traffic Generating Developments. The Guide does not specifically provide trip generation rates for medical research facilities as distinct from either an office/commercial building or medical facility with visiting patients. The operational characteristics clearly set WMI apart from these land use types.

Similarly parking requirements stipulated within the Guide are not considered appropriate. In addition to the specific nature of WMI, the Westmead area is severely constrained with respect to traffic capacity and parking supply, impacting on current and future parking demand.

Given the lack of available data on which to base an assessment of future traffic and parking requirements data has been extrapolated from travel habits of existing staff. This analysis develops a set of targets for WMI in terms of the future development and staff travel.

The Stage 1 WMI building will represent additional floorspace within the Westmead Hospital Campus, however, all staff who will be accommodated in the new building will relocate from elsewhere on the WHC. The 400 FTE staff that will relocate currently occupy space in the existing WMI building and through Westmead Hospital. This space is overcrowded, cramped and inadequate to meet the needs of the research staff. There is an unacceptable level of overcrowding which has prompted the decision to fund and construct the new building on Hawkesbury Road.

The new building will provide around twice the floorspace currently occupied by WMI, representing a much more acceptable occupancy level.

At an acceptable level of employee density the floorspace vacated by WMI staff will be reoccupied by only an estimated 200 FTEs. This is 50% of the current activity level.

The new development will cater for all existing staff and activities. This equates to 400 FTEs. Future growth will be accommodated through the development of Stage 2. This report is only concerned with Stage 1.

6.2 ASSUMPTIONS

In calculating the potential impact on the local area and parking requirements the following assumptions are made:

- Maintaining University of Sydney's no student parking policy. Students will not be provided with parking. Based on analysis of annual employment data students constitute 30% of staff and this proportion of students will continue into the future.
- The total number of staff that can be accommodated in the vacated floorspace is 200. This represents a net increase across the Westmead Hospital (including the WMI development site) of 200 FTE staff.
- The WMI development should not reduce the parking currently available by increasing demand beyond that which can be accommodated within the WMI development. That is, the status quo should be maintained.
- The Western Sydney Area Health Service will pursue a comprehensive travel demand management initiative across the Westmead Hospital site in conjunction with the planned reorganisation of parking.

6.3 PARKING PROVISION

In terms of defining travel impacts, parking is the primary constraint. Parking availability will define the mode share targets and therefore the scale and content of the travel demand management plan to be put in place by WMI.

Existing parking use by WMI staff can be calculated:

400 FTEs with a driver mode share of 64%⁶

$400 \times 0.64 = 256$ drivers

256 drivers less 5% sick or on annual leave

$256 \times 0.95 = \mathbf{243}$ parking spaces

Based on the data available WMI staff currently utilise 243 parking spaces in the Westmead area.

Future parking requirements must be calculated for the staff expected to occupy the vacated WMI floorspace and for relocated WMI staff.

The 200 staff occupying the vacated WMI floorspace are likely to display similar travel characteristics to the Westmead Hospital Campus average as indicated by the available Census data. It is therefore assumed these staff members will exhibit a car driver mode share of 77%.

Future parking needs of this staff group can be calculated:

200 FTEs with a car driver mode share of 77%⁷

$200 \times 0.77 = 154$ drivers

154 drivers less 5% sick or on annual leave

$154 \times 0.95 = \mathbf{146}$ parking spaces

Based on the parking currently utilised by WMI and that required to meet the needs of the vacated floorspace in the future, **97 parking spaces** will remain available to WMI staff:

$243 - 146 = 97$ parking spaces

In addition it is proposed to provide 50 spaces adjacent to the new WMI building. This will provide WMI with **147 parking spaces**:

$97 + 50 = 147$ parking spaces

Ensuring the net increase in parking associated with the WMI development is minimised is crucial to the long term viability of the Westmead Health Precinct.

6.4 MODAL TARGETS

As stated above the net increase in parking provided must be minimised, recognising the significant pressure already being placed on the local road network. The new WMI development offers an opportunity to lead the way in travel demand management within the precinct, demonstrating a new approach to staff travel.

⁶ Overall WMI staff drive mode share from survey

⁷ WHC drive mode share from analysis of Census data for TZ 1693

In the future WMI will need to ensure staff parking demand does not exceed 147 spaces on any one day. Of these 147 spaces, 50 will be provided at grade adjacent to the WMI building and the remaining 97 will be available through the local area including within Westmead Hospital staff parking areas.

This will necessarily require a much more stringent approach to the University of Sydney policy on student parking. WMI will not provide any student parking within WMI controlled parking or on the Westmead Hospital campus, Students will be actively discouraged from parking within the local area. Initiatives aimed specifically at students will be included in the travel demand management plan (below).

The non-student staff at WMI currently exhibit a car driver mode share of 72%. In the future this will need to be reduced to 48%:

400 FTEs less students (20% of the total)⁸

400 x 0.8 = 320 non student FTEs

320 non student FTEs less 5% sick or on annual leave

320 x 0.95 = 304 non student FTEs at work on any given day

147 parking spaces available for 304 staff indicates a driver mode share of 48%:

*147 / 304 = **48% driver mode share***

A car driver mode share of 48% indicates that other modes must combine to give a mode share of 52%:

*1 - 0.48 = **52% non car driver mode share***

The future mode share targets for non student WMI staff are:

- Car driver – 48%
- Non car driver – 52%

This compares with the modal split targets adopted by CMRI:⁹

- Car driver – 42%
- Non car driver – 58%

6.5 TRAFFIC GENERATION

The new WMI development will create 50 parking spaces. Survey data indicates that 63.5% of staff arrive during the peak hour (8am – 9am).

This indicates the WMI development will generate an **additional 32 vehicles** in the peak hour.

⁸ While 30% of staff are students, students are more likely to work part-time and therefore it is estimated they constitute 20% of all FTEs. This is supported by the findings of the staff survey.

⁹ SCAPE (2009) Children's Medical Research Institute – Transport and Accessibility

6.6 TRAFFIC IMPACTS ON THE NETWORK

No traffic modelling has been undertaken to support this application. Parramatta City Council has recently undertaken a significant traffic modelling exercise with the development of a SATURN model.¹⁰ The analysis from this modelling exercise has been made available by PCC.

Common sense suggests that 32 vehicles spread across an hour will have minimal impact on what is already a congested network. Given the location of WMI it is assumed these vehicles will all approach via the Hawkesbury Road / Darcy Road intersection.

The SKM paper for PCC indicates that the Hawkesbury Road / Darcy Road intersection currently operates at a Level of Service (LOS) B in the AM peak with an average delay of 19 seconds. It is noted that LOS is measured on a scale from A to F, where LOS A represents ideal operation and LOS F unacceptable operation or 'fail'.

SKM went on to consider road network operating conditions in 2029 given planned development within the precinct and increases in network wide levels of traffic:

Once the 2009 AM and PM peak models were calibrated and assessed the 2029 models were then developed. The 2029 models included the background growth of external trips at 1.5% per annum and the growth internally was assumed to consist of the developments at

- *Westmead hospitals re-development (1,255 Trips)*
- *University of Western Sydney site development (2,065 Trips)*
- *Bridge St / Darcy Road development (383 Trips)*

Despite significant deterioration in network performance the Hawkesbury Road / Darcy Road intersection continues to perform at a LOS B. The wider network impacts, however, will have unacceptable implications for traffic flow and the SKM paper concludes:

This reduction in the network efficiency indicate that significant additional capacity is required on the road network and that more sustainable modes need to be provided for otherwise the development in the area becomes unsustainable. Therefore, the vehicle demand needs to be managed through demand management strategies such as parking restrictions and parking controls, these strategies must be complemented with public transport, walking and cycling provisions to ensure that the dependence on cars is reduced in the study area.

Clearly planned growth for Westmead, supported through the Metropolitan Strategy, with the expected increase in general traffic levels across the wider network will have a far greater impact than that of WMI (32 peak hour trips). It has already been recognised these greater development impacts will need to be addressed. WMI is at the forefront of bringing about a reduced reliance on private vehicles within the Westmead precinct.

¹⁰ SKM (2009) Westmead Integrated Transport Plan – Road Network Discussion Paper

7 Transport Demand Management

7.1 INTRODUCTION

WMI recognises the broader need to reduce staff use of private cars. A reduction in car use brings environmental benefits at the global, regional and local level. Reduced car use is generally achieved through the increased use of alternatives including public transport, walking and cycling. These modes tend to result in an increase in physical activity with associated health benefits.

A reduced use of private cars for staff travel to and from work is consistent with WMI's desire to reduce its environmental impact through the development of a new purpose built facility. It also recognises the increasingly constrained road and parking capacity within the Westmead precinct and a desire not to contribute unnecessarily to local problems. The travel demand management strategy ensures the development of the WMI building and research hub (Stage 1) will be achieved within the resources available and meeting the mode share targets identified.

In determining an appropriate transport demand strategy reference is made to NSW Government guidance on the development of workplace travel plans.¹¹

7.2 CONSTRAINTS

In developing a transport demand management plan for WMI a number of specific workplace related constraints have been recognised. These include:

- Staff may work irregular hours necessitating late night and weekend work. At least a proportion of late night working is unpredictable. Animal attendants in particular are required to work a 7 day roster.
- WMI competes for senior research staff internationally. This requires attractive salary packages which may include benefits such as a car, fuel and parking.

7.3 OPPORTUNITIES

Similarly the travel demand management plan potentially benefits from a number of recognised opportunities, including:

- Move to a new purpose built facility which will mark a significant change for all staff and this provides an opportunity for change.
- Around 20% of staff are students and the University of Sydney already has a policy in place that no student parking is provided. Students will provide a core participant group within the travel demand management program.
- Many staff work flexible hours enabling work hours to be planned around transport choices to some extent.
- Excellent on site facilities including change rooms and showers which will be a great improvement in comparison with current facilities.
- 50 parking spaces in the direct control of WMI. This parking can be managed and allocated as part of the travel demand management plan contributing to the plan disincentives and incentives.

¹¹ www.pcal.nsw.gov.au/workplace_travel_plans

- Location served by rail and bus services.
- Metropolitan Transport Plan funding commitments to strategic bus corridors, additional buses and Western Fast Rail. Longer term commitments to metro rail and the Parramatta – Epping rail link.
- Mix of locally available accommodation to rent and purchase.
- Good walking and cycling networks in the local area and a State Government commitment to closing gaps in the strategic cycle network.
- Part of a major employment precinct with strong peak and inter peak transport demand that supports improved public transport services.
- Parramatta City Council's transport policy position focusing on the promotion and support of sustainable transport.

7.4 IMPACT MITIGATION

The development of the new WMI building will deliver a number of transport benefits including:

- Secure, covered staff cycle parking;
- Highly visible cycle racks for visitor use;
- Staff facilities including showers and change rooms easily accessible from the cycle parking location;
- Highly visible entry on Hawkesbury Road aligned with the direction of approach from Westmead Station and the T-way stops on Darcy Road;
- Single building for all WMI staff, facilitating programs that benefit from a greater number of staff, such as ridesharing;
- Collocation with CMRI and KRI, increasing the potential to develop joint transport programs.

The location of all staff in a single building will constitute a major change. This will facilitate staff interaction which is fundamental to the success of specific travel initiatives such as ridesharing. It will also provide central gathering spaces, noticeboard locations and the like which will promote the dissemination of information.

7.5 TRAVEL BEHAVIOUR CHANGE PROGRAM

To achieve the necessary mode shift WMI recognises and embraces the need to develop and implement a travel behaviour change initiative, focused on staff travel. While over time this may also encompass visitors, the initial focus on staff will build up initiatives.

It is noted that while students will not be offered parking they will be a particular focus of the travel demand management plan. The nature of student attendance and the frequency with which new students commence work/studies at WMI will bring particular challenges. However, students at WMI are already low car users and will provide an excellent basis for the development of the WMI travel demand management plan. All the initiatives identified are intended to be include students.

A number of appropriate initiatives based on an understanding of WMI activities and staff have been identified.

Walking and Cycling

WMI does not currently have any dedicated cycle parking available to staff. Staff currently only have access to basic washroom facilities or staff showers within Westmead Hospital. There are no staff lockers or areas available for hanging and drying clothes and towels.

The redevelopment will provide 25 secure cycle parking spaces for staff use (restricted access) to the rear of the building. Separate cycle hoops will be available at the front of the building for visitor and casual use. These spaces will be visible from reception. Ongoing monitoring will ensure additional cycle parking is provided to meet future growth in demand. Both the staff parking and visitor cycle parking can be extended as required.

A building entry adjacent to the staff cycle parking will lead directly to shower and changing room facilities. Three showers will be available for men and three for women. In addition showers will be included in the accessible toilets provided on each level. This offers staff an additional eight showers within the building, bringing the total number of showers to 14.

The ground floor plan of the proposed WMI development is included in Appendix D.

Lockers will be made available to staff to facilitate the storage of clothes, toiletries and other similar items at work. Changing rooms will have ironing facilities and fresh towels available for staff use.

Developing programs around staff who already walk and cycle to work will be important within the new WMI facility. These staff members will be able to act as champions, pooling their knowledge of local walk and cycle routes and assisting existing and new employees who would like to walk and cycle. Staff can also be encouraged to act as walk or cycle 'buddies', travelling with colleagues who may be unfamiliar with local routes to boost their confidence. There are opportunities to develop synergies with CMRI next door and also the Children's Hospital at Westmead which already has an active bicycle user group (BUG).

The design of the new WMI building includes a prominent 'front door' on Hawkesbury Road, providing a highly visible and accessible entry. The development will also remove a vehicle cross over on Hawkesbury Road, improving the pedestrian environment in the immediate vicinity.

Public Transport

Encouraging staff use of public transport will be an important part of the travel demand management plan. Analysis of staff home locations suggests there is considerable opportunity to increase both bus and train use. Information provision will be central to increasing public transport use amongst staff. Information can improve knowledge about services which exist.

To encourage staff to trial public transport, WMI will offer staff free weekly tickets on a one off basis. On commencement of the scheme all staff will be offered a one week MyZone ticket to cover their journey between home and WMI. New staff will be provided with a free one week MyZone ticket on commencement of their employment as part of their induction package. The cost of weekly travel tickets is below the Fringe Benefits Tax (FBT) liability threshold.

To further support staff choosing to travel on public transport WMI may offer interest free loans to assist staff in purchasing an annual MyZone ticket. Annual tickets offer considerable savings over the purchase of other tickets but can be a considerable expenditure for many people. Interest free loans can overcome the initial cost with WMI then recovering the loan directly from net pay over a 10 or 12 month period. As this initiative is cost neutral it will not attract FBT.

Transport Information

WMI is well located to rail and bus services. Analysis of staff home locations suggests public transport use could increase. It is possible some staff are not aware of the public transport options available or improvements that may have occurred more recently (such as increased service frequency on the T-way and introduction of MyZone ticketing). WMI will utilise the proposed Westmead TAG (transport access guide) and develop specific transport information focused on staff needs. The information will highlight high frequency, direct services.

Ride Sharing

At present only a very small proportion of staff travel as passengers to and from work. Analysis of staff home locations and preferred travel mode suggests there is scope to promote ride sharing. While staff numbers do not warrant a major investment in ride sharing, WMI can encourage staff to consider ride sharing through provision of dedicated noticeboard space and events specifically designed to introduce staff to others who may be travelling from the same or similar location. WMI will investigate the provision of a few dedicated priority ride share parking spaces.

Given that WMI will be located adjacent to CMRI and KRI there is an opportunity to develop a cross facility ride share program. WMI is also aware of the Western Sydney Carpool initiative and recognises the value of such an initiative would be highly relevant to employees at Westmead.

New Employees

WMI continually welcomes new staff members. Students in particular may be employed at WMI for relatively short periods in line with their studies. WMI will develop a staff induction pack which will include travel information, including information on travel options, a local area map, Westmead TAG, useful staff contacts and a one week MyZone ticket for their home to work trip.

WMI will also look to develop staff support services which will complement the travel demand management program. One initiative will be assisting new staff in identifying local accommodation options if required, promoting a focus on living within walking distance or work.

Home/Work Travel Assistance

The need to respond to research requirements and other commitments with Westmead Hospital and/or University of Sydney, results in many staff driving to and from work. Experiments may require staff to work long and possibly unpredictable hours while joint appointments may mean transferring to a different work location through the day. Recognising that public transport options diminish through the evenings and may not cater for complex trip patterns, WMI will develop a scheme to assist staff with additional safe travel options.

This is likely to include a mix of taxi use, pool vehicle provision and share car availability. Car share offers staff access to a vehicle in emergency and to undertake personal business during the day. WMI will work with other employers at WHC to establish a car share scheme 'pod' in conjunction with Parramatta City Council and a private car share operator such as *Go Get*. WMI will facilitate staff access to the car share scheme through assistance with joining and membership fees.

Parking Allocation Policy

WMI will control 50 parking spaces at the proposed development. Management of this parking will be integrated with the travel demand management plan. A comprehensive parking allocation policy will be developed. The policy will:

- Recognise the true cost of parking provision and charge staff for parking accordingly;

- Be responsive to staff travel needs and the availability of alternatives for individual staff members;
- Recognise the value of parking as an incentive to encourage ride sharing.

Students

The student population at WMI will require special attention within the travel demand management plan. Students will not be provided with any parking in line with University of Sydney policy and recognising the constraints on the local road network. Students will also be discouraged from bringing cars to Westmead and utilising parking elsewhere in the local area.

To ensure students do not drive to Westmead a dedicated student travel program will be put in place. This will provide students with specific resources and assistance to facilitate travel between their home and Westmead. Specifically this will include:

- Additional support through the provision of MyZone tickets,
- Travel planning advice,
- Assistance in finding local accommodation if required,
- Ride share incentives.

7.6 IMPLEMENTATION

WMI will commence implementation of the transport initiatives prior to the move to the new facility, recognising that changing travel behaviour is a long term commitment and many of the initiatives would benefit staff now, particularly those to increase public transport use. This recognises the opportunity to develop sustainable travel habits amongst new staff as they join WMI ahead of the move. This places an early focus on initiatives aimed at new staff and increasing public transport use.

7.7 MONITORING

WMI is committed to monitoring staff travel impacts to ensure that the identified targets are met in the future. This will allow WMI to review and revise the demand management strategies in place ahead of the move and following the relocation.

Annual staff travel surveys will be completed to establish mode share. These surveys can be relatively quick and focus on collection mode share information. On line forums can collect staff attitudes, suggestions and opinions over time.

WMI will report the outcomes of the survey and other monitoring activities to the WMI Executive on an annual basis. This will also provide the WMI Executive with the opportunity to review the travel demand management plan and make changes as required, for example, increasing the number of staff cycle parking spaces.

8 Conclusions

8.1 INTRODUCTION

The WMI Stage 1 development proposal, including Stage 1 of the Westmead Research Hub has much to recommend it. It will significantly improve the potential of existing WMI activities and provide WMI researchers with much more suitable accommodation. It will enable WMI to compete nationally and internationally for staff. It will also take the first step to providing a centrally located hub facility for the use of WMI, CMRI and KRI staff. This will increase the research potential and capacity of all three institutes.

While all staff that will be accommodated in the new WMI building are already located at Westmead Hospital, they will vacate floorspace that will be reused. This space will be reused at a much lower level of intensity than at present, recognising that existing levels of staff overcrowding are unacceptable.

There will be a transport impact as a result of the development of the new WMI building and the relocation of staff. The impact will essentially result from an increase in staff on the Westmead Hospital site and accommodated in the space to be vacated by WMI. As WMI will essentially be responsible for the increase in floorspace, it is taking the responsibility for managing resulting transport impacts.

8.2 KEY CONCLUSIONS

In total 50 new parking spaces will be provided adjacent to the new WMI building. This will be the net increase in parking provision across the Westmead Health Campus. A further 97 parking spaces already utilised by WMI staff in the Westmead precinct will continue to be used by WMI staff.

The reuse of existing WMI space has been accounted for assuming the prevailing mode share for WHC will continue and recognising WMI will have no opportunity to influence mode share beyond its own staff.

The parking available to WMI staff in the future sets a target driver mode share at 48%. This is comparable with the target adopted by CMRI. WMI will join CMRI in leading the way in reducing car dependency across the Westmead Health Campus.

The target mode share is considered feasible based on analysis of existing staff travel patterns, home locations and potential for change. A comprehensive travel demand management initiative will be developed and resourced by WMI to ensure the identified target is met.

The WMI development will add just 32 vehicle trips to the road network in the AM peak hour. The maximum impact of these trips will be at the Hawkesbury Road / Darcy Road intersection and recent studies indicate this intersection performs well and will continue to do so in the future.

The existing parking and transport functions of the proposed development site will remain with access from the hospital's internal road network. A vehicle crossover on Hawkesbury Road will be removed, improving local pedestrian amenity.

Appendix A
Location Plan



BVNArchitecture

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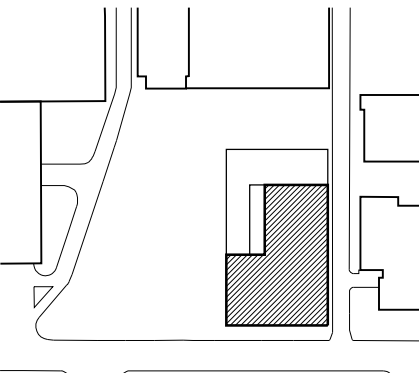
ISSUE	DATE	FOR
1	16.07.10	SPP PDP
2	04.08.10	SPP PDP
3	16.08.10	INFORMATION
4	18.08.10	DA



PROJECT

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BVN PROJECT NUMBER

s0911005
DRAWING KEY



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DA-A-01	4

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Appendix B
Staff Questionnaire

Westmead Millennium Institute Redevelopment

Staff travel survey

Work is well underway to plan and design the new Millennium Institute and Research Hub on Hawkesbury Road. As part of the development application process transport and access needs at the new building must be considered. The essential first step is understanding how staff and students at WMI currently travel to and from Westmead Hospital. The more information we have at this stage then the better the outcome in the future.

SCAPE has been commissioned by Health Infrastructure to undertake the transport study which will support the development application. If you have any queries about this questionnaire please call Bryony Cooper on 0400 551199.

Please complete the questionnaire by ticking the relevant box and adding additional information if requested. When completed please hand the questionnaire to Dezley at WMI reception.

Thank you!

Q1 What is the nature of your current employment with WMI? Please tick one box only.

Full time (>36 hours/week)	<input type="checkbox"/>	01
Part time	<input type="checkbox"/>	02
Casual	<input type="checkbox"/>	03
Student (PhD, MSc etc)	<input type="checkbox"/>	04
Other employee (please specify)	<input type="text"/>	

Q2 Do you also work in another role(s) at Westmead Health Campus (i.e. for an employer other than WMI)?

Yes	<input type="checkbox"/>	01	if <u>yes</u> what % of your time at Westmead do you spend at WMI?	<input type="text"/>	%
No	<input type="checkbox"/>	02			

Q3 How long have you worked at WMI?

<input type="text"/>	years and	<input type="text"/>	months
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Q4 Please tick one box for each day in the last full week to indicate your main mode of transport for your trip to work. Where you used more than one mode in a trip, your main mode is the one you used to travel the greatest distance.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Car—driver	<input type="checkbox"/> 01	<input type="checkbox"/> 01	<input type="checkbox"/> 01	<input type="checkbox"/> 01	<input type="checkbox"/> 01	<input type="checkbox"/> 01	<input type="checkbox"/> 01
Car—passenger	<input type="checkbox"/> 02	<input type="checkbox"/> 02	<input type="checkbox"/> 02	<input type="checkbox"/> 02	<input type="checkbox"/> 02	<input type="checkbox"/> 02	<input type="checkbox"/> 02
Train	<input type="checkbox"/> 03	<input type="checkbox"/> 03	<input type="checkbox"/> 03	<input type="checkbox"/> 03	<input type="checkbox"/> 03	<input type="checkbox"/> 03	<input type="checkbox"/> 03
Bus	<input type="checkbox"/> 04	<input type="checkbox"/> 04	<input type="checkbox"/> 04	<input type="checkbox"/> 04	<input type="checkbox"/> 04	<input type="checkbox"/> 04	<input type="checkbox"/> 04
Walk	<input type="checkbox"/> 05	<input type="checkbox"/> 05	<input type="checkbox"/> 05	<input type="checkbox"/> 05	<input type="checkbox"/> 05	<input type="checkbox"/> 05	<input type="checkbox"/> 05
Cycle	<input type="checkbox"/> 06	<input type="checkbox"/> 06	<input type="checkbox"/> 06	<input type="checkbox"/> 06	<input type="checkbox"/> 06	<input type="checkbox"/> 06	<input type="checkbox"/> 06
Motorbike/scooter	<input type="checkbox"/> 07	<input type="checkbox"/> 07	<input type="checkbox"/> 07	<input type="checkbox"/> 07	<input type="checkbox"/> 07	<input type="checkbox"/> 07	<input type="checkbox"/> 07
Other mode	<input type="checkbox"/> 08	<input type="checkbox"/> 08	<input type="checkbox"/> 08	<input type="checkbox"/> 08	<input type="checkbox"/> 08	<input type="checkbox"/> 08	<input type="checkbox"/> 08
Did not go to work	<input type="checkbox"/> 09	<input type="checkbox"/> 09	<input type="checkbox"/> 09	<input type="checkbox"/> 09	<input type="checkbox"/> 09	<input type="checkbox"/> 09	<input type="checkbox"/> 09

Q5 Thinking about the last day you worked at WMI, what time did you arrive at work and at what time did you leave?

Arrived at WMI	<input type="text"/>	Left WMI	<input type="text"/>
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Q6 And how often do you use each of the following types of transport when travelling to or from work?

	Daily	Most days	Once a week	Once a month	Occasionally	Never
Car—driver	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Car—passenger	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Train	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Bus	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Walk	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Cycle	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Motorbike/scooter	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06
Other mode	<input type="checkbox"/> 01	<input type="checkbox"/> 02	<input type="checkbox"/> 03	<input type="checkbox"/> 04	<input type="checkbox"/> 05	<input type="checkbox"/> 06

Q7 If you drive to work at WMI, where do you usually park?

Westmead Hospital staff parking	<input type="checkbox"/> 01	UWS site car park (Wilsons)	<input type="checkbox"/> 05
Westmead Hospital general parking	<input type="checkbox"/> 02	On street parking in the local area	<input type="checkbox"/> 06
Children's Hospital staff parking	<input type="checkbox"/> 03	WMI car parking	<input type="checkbox"/> 07
Children's Hospital general parking	<input type="checkbox"/> 04	Do not drive to work	<input type="checkbox"/> 09
Other car parking (please specify)	<input type="checkbox"/> 08		

Q8 Please can you confirm your preferred mode of transport to/from WMI?

Car—driver	<input type="checkbox"/> 01	Walk	<input type="checkbox"/> 05
Car—passenger	<input type="checkbox"/> 02	Cycle	<input type="checkbox"/> 06
Train	<input type="checkbox"/> 03	Motorbike/scooter	<input type="checkbox"/> 07
Bus	<input type="checkbox"/> 04	Other (please specify)	

Q9 How long does the trip to / from work usually take by your preferred mode of transport?

To WMI	<input type="text"/>	hours	<input type="text"/>	minutes
From WMI	<input type="text"/>	hours	<input type="text"/>	minutes

Q10 Do you have any mobility difficulty that affects your transport choice?

Yes	<input type="checkbox"/> 01	No	<input type="checkbox"/> 02
-----	-----------------------------	----	-----------------------------

Q11 Where do you live?

Suburb	<input type="text"/>	Postcode	<input type="text"/>
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Q12 Please indicate your age group?

19 years or under	<input type="checkbox"/> 01	40 – 49 years	<input type="checkbox"/> 04
20 – 29 years	<input type="checkbox"/> 02	50 years and over	<input type="checkbox"/> 05
30 – 39 years	<input type="checkbox"/> 03		

Q13 Are you male or female?

Male	<input type="checkbox"/> 01	Female	<input type="checkbox"/> 02
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Appendix C
Staff Home Locations

LEGEND

★

WMI

●

Car as a driver

●

Car as a passenger

●

Train

●

Bus

●

Foot

●

Bicycle

○

Indicates preferred mode if respondent did not go to work that day

Staff not included on the map include those who did not provide a location or mode, and those who live outside the mapped area (in Hamilton, Cessnock, Lawson, Linden, Tahmoor, Leura, Springwood, Wentworth Falls, Winnalee, Springfield, Cranebrook, Glenbrook, Hinton, Stanwell Park and Grose Vale).

Appendix D
Ground Floor Plan



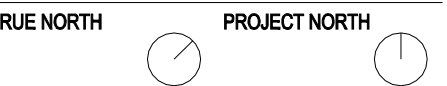
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FLOOR PLAN
LEVEL 00 - LOWER GROUND

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