Submission
No 89

# THE TRANSPORT NEEDS OF SYDNEY'S NORTH-WEST SECTOR

**Organisation:** Stapleton Transportation and Planning Pty Ltd

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# Transport for the NW Sector

## SUMMARY OF RECOMMENDATIONS

### Short term 1- 5 years (2012)

1 Network of buses passing close to most households every 10 mins. (Page 5).

2 Upgrade T'way Express to City in Castle Hill and near the City. (Page 8).

3 Upgrade Showground Road with T'way and four/six lanes. (Page 9).

### Medium Term 5 - 10 years (2018)

4 T'way from Castle Hill to Rouse Hill via Norwest. (Page 10).

5 Metro Light Rail from Castle Hill to Parramatta. (Page 10).

6 Complete Castle Hill bypass. (Page 11).

### Long Term 10 - 25 years

7 Metro Light Rail from Rouse Hill to Castle Hill. (Page 12).

8 Express Metro Light Rail from Castle Hill to Macquarie Park (Page 13).

9 Macquarie Park a stop on Express Line from Gosford to the City (Page 14)

10 Express Service from Richmond Line to City. (Page 16).

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# 1 INTRODUCTION.

This submission considers short, medium and long term steps that could be taken to upgrade transport in the North West Sector.

These conclusions are based on three bodies of work I have completed; (1) For the DIPNR analysing Transport Data Centre travel data for the North West and being a major contributor to the NW Design Workshop (2003) and the follow up report; (2) further more detailed analysis was completed in the preparation of an integrated transport strategy for Sydney SITS (See End Note VII). I have also recently completed a submission to the Federal Government Infrastructure Australia on Transport Infrastructure for Sydney which reviewed our findings in the light of an economic slow down (A summary of these recommendations and See End Note I [I]). These proposals differ from earlier presentations

The public debate centres almost entirely, and correctly, on existing access to the Hills District, which houses about 120,000 residents. The development pattern has made it difficult to run efficient public transport thereby restricting movement in the area by youths, the elderly and others unable to use or afford a car.

At the outset it should be recognised that further development of the NW Sector, as studied by the DIPNR, will be contained in Marsden Park, Schofields, Riverstone and Rooty Hill. The additional population of 190,000 in the new part of the NW Sector will perhaps be moving in over the next 20 years. Some of these new residents will use Rouse Hill as their regional centre, others Blacktown and even Penrith and Windsor; all

of which are closer than Castle Hill to the future expansion of the NW Sector. They will use express trains from the Richmond Line for access to the City. This submission focuses on the existing residents of Baulkham Hills in the Hill District.

Development in the existing areas of Baulkham Hills is almost complete (Kellyville, Cherrybrook). The Balmoral Road precinct, for which we prepared a strategic plan for Council (2001), is the only major area yet to be developed.

## 2 ISSUES

The issues are well known; and in brief: traffic has increased quickly as the local population has expanded over the last 20 years; congestion has been increasing exponentially, particularly on the approaches to Castle Hill and on Castle Hill Road and Windsor Road.

## 3 FUTURE TRAVEL

New residents in the SW Sector will have less impact on the Hills District tan the previous development in Kellyville.

However under typical economic conditions the average travel made by each existing household increases by about 1½% a year, 33% in 25 years - mostly for - often longer journeys in the region but also an increase in the length of commuter trips (as people can afford more on travel). Continuing with the same proportion of travel by car would result in a further steep increase in congestion in the Hills District.

So, the long term prediction is more travel from existing residents irrespective of the development of the NW Sector.

The short term prediction has changed in the last few weeks. An economic down turn typically sees a reduction in the use of cars and an immediate increase in the use of public transport as some residents seek to reduce their travel costs, particularly those deeply affected by less income and higher fuel costs, mortgages and tolls. This move to public transport is already happening; the high toll on the M2 has increased the demand for public transport to the City and resulted in about 40 buses operating as express services every peak period (the number is increasing).

Hence there is a window of opportunity to change behaviour by providing better public transport.

Attitudes are changing with more residents recognising the need for public transport for some of their journeys or someone else's.

## 4 STRATEGIC AIMS

Most travel is local and regional, only about 4% of travel from Baulkham Hills is to the City.

The priorities to resolve current and future issues for the Hills District, e.g. for existing residents; are:

1. To reduce traffic congestion and the need to use a car on most journeys.
2. To bring public transport close to all residents.
3. To provide local public transport that is frequent, comfortable and viable.
4. To increase the use of public transport for movement around Baulkham Hills to access activities and community infrastructure.
5. Increase the use of public transport between Castle Hill, Rouse Hill and Norwest.
6. To provide an express public transport service to the City.
7. To take into account the future population.
8. To optimise expenditure on transport by selecting the most effective transport option; be it a road, a T'way, a light rail or a rail line.

This last point brings the planning for Baulkham Hills into competition with the remainder of Metropolitan Sydney.

## 5 RECOMMENDATIONS and PRIORITIES

### Recommendation 1 - A Network of buses

The intention of this proposal is to provide at least one bus service within 400m of most households. This need applies throughout Metropolitan Sydney and the system is referred to as WebNET. Figure 1 shows a draft of how a route map might look for Castle Hill.

**It has been demonstrated that over 90% of households could be accessed with ten WebNET services to Castle Hill.** (Figure 5 illustrates the proportion of Castle Hill that would be covered by WebNET, there are few gaps expect around open space.)

Of the ten WebNET bus services; nine would pass through Castle Hill and only one would terminate(See Figure 1). Five of the through routes would terminate in the suburbs north of Castle Hill (Linksley Ave, Tuckwell Rd, Sebastian Dr, Jenner Rd, and Shepherds Dr); and four other routes would pass through Castle Hill as part of a long route from east to west.

**Analysis of the demand indicates that each bus service could operate at least every ten minutes, unlike the current feeder services** (Refer to End Note II for some notes on analysis)[II]. Figure 6 illustrates that as well as all shopping centres all major industrial and employment areas and adult education campuses are served directly from Castle Hill.

Apart from providing every resident with the option to reach public transport with ease from their homes; the services focus on Castle Hill where the frequency of services would be 1 bus per minute in each direction, a comfortable load. **This would support growth in the town centre and reduce the need of car dependency to reach the centre**.

In the medium term - and subject partly to the rate of development of the NW Sector - a similar level of access for Rouse Hill has been demonstrated with nine bus services.

The social impact of these "WebNET" buses would be that every household to be aware of a bus near their street and that it goes to at least one of their local centres as well as a "far off" place, which may or may not be of interest. Every street is therefore part of the Metropolitan transport system; which it already is for road traffic. An outline of the WebNET Routes and their regional connections is given in End Note [III], and illustrated in Figures 1 and 6.

The proposed WebNET routes have been specifically designed to provide access to most major infrastructure, such as recreation centres and high schools with a maximum of one change. Most journeys, even between suburban streets, will be possible with not more than one change. An outline of how some users would transfer in suburban streets is given in End Note [IV].

A feature in providing direct access to all households means that bus routes must be spread throughout local streets (generally collector roads) rather than concentrated on arterial roads. This is counter intuitive but works well bringing the buses to the community; locating stops that are in quiet locations and keeping off main arterial roads which are noisy for wait and difficult to cross. This is more convenient for residents. The proposed routes are very direct with as few as possibly turns at intersections. The noise level from buses must be part of a performance requirement along with seat, information, (and ticketing!). Most routes will have express sections and use T'ways, others will require priority at intersections. **This will be an entirely new experience on bus travel.** Although it has to be said that the existing 600 services from the Hill to the City set a high standard apart from the difficulties of access through the City and this is addressed in our submission to the Federal Government.

**Recommendation 2 T'way Express to City upgraded in Castle Hill and near the City.**

Looking at the detail; WebNET links three of the nine routes to the City and hence 40% of residents would be able to board these buses near their homes. These services (18 per hour) would be supplemented by additional services during peak periods.

Those not living along the three routes would need to catch other local WebNET bus to Castle Hill and change onto these additional services. This change would involve a wait of less than two minutes during peak periods and just over three minutes throughout the day.

The frequency of the local WebNET services will often be a quicker option for residents than to driving and the walk between a park and ride car park and the bus interchange. **More importantly for the business of Castle Hill; a park and ride garage could attract up to 1000 vehicle per hour; hardly what is needed in a congested Centre even after the construction of the bypass.** And the interchange can be (must be) designed to support local businesses.

**It is recommended that the short term the Express buses from Castle Hill to the CBD should be improved by constructing of three T'way links** (Refer to Figure 2)

- **The link between Castlewood Drive and High Road (at the edge of the Village Green), this is part of the Baulkham Hills strategic plan.**
- **Another local recommendation is to build a T'way entry to the M2 at Oaks Road (North Rocks)** - this will be a rather long ramp.

- **In our submission to the Federal Government we have also recommended measures to improve the reliability for Express Bus services approaching the Harbour Bridge, improve buses operations in the City and for Express Buses to be routed through the City rather than stopping in it** (See footnote [1]).

To give an idea of how this through routing might work; of the three bus routes coming into the City from Castle Hill our outline strategy has; one going to UNSW and Maroubra; one following the Pacific Highway though Artarmon and St Leonards and then through the City to Sydney University and RPAH; and the third to Alexandria and Botany. Long distance to be sure but the advantage of not changing versus some time lost on slower sections would suit many riders. Nevertheless there will be interchange between these routes for the residents who boarded before Castle Hill.

**Recommendation 3 - Upgrade Showground Road with T'way and four lanes.**

The outline strategy for WebNET indicates demand would support a concentration of six services along Showground Road between Castle Hill and The Hills Centre (currently the Civic Centre). The headway between buses would therefore be less than two minutes; always one visible in each direction at any time.

**There is an immediate priority to upgrade Showground Road to accommodate a T'way and reduce the level of traffic congestion.**

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[1] This would require changing the operational contracts on sharing routes, and this would mostly likely be supported by Westbus, another topic).

**Recommendation 4 - T'way from Castle Hill to Rouse Hill via Norwest.**

Castle Hill, Rouse Hill and Norwest have an interesting synergy (see End Note [V]) and will act together to provide a choice of activities for residents throughout the region.

The aim of the transport proposal for this corridor is to create a public transport system that will be used by local residents who either live in one of the centres or have made their way to one centre and then want to move onto another centre. (This is somewhat different to other regional needs see End Note [VI] )

The outline strategy justifies three routes on Showground Road continuing to Norwest; of which two would continue to Rouse Hill. 12 buses an hour could pass link all three centres, (5 minute headway between buses; a wait of less than 3 minutes).

**The medium term recommendation (5 - 8 years) for this movement is to run buses along a Transitway following closely to the route of the NW Railway,** e.g. Showground Rd, Carrington Rd, direct to Norwest Avenue, Solent Circuit, a connection to Fairway Drive and the alignment of the Railway to Balmoral Road to join the existing T'way. (This could perhaps be completed in less than 5 years) (See Figure 2).

**Recommendation 5 Metro Light Rail from Castle Hill to Parramatta.** (This concept was presented to the Mayor in 2006).

Movement between the Hill District and Parramatta will support a rail line. The demand at the approach to Parramatta Road is the equivalent of 80 full buses an hour, or 14 full

small Light Rail cars (7 large), or 4 Metro Trains. Using the operating principle that no service should operate with less than 6 services an hour Metro trains are not suitable but Light Rail is and 80 buses would create environmental and operational problems in Parramatta and on Old Windsor Road.

Light Rail would not fit in with traffic on Old Windsor Road or Old Northern Road, both of which are congested; therefore a rail line needs to be underground and operating with small Light Rail Metro Cars to offer a frequent service (Refer to Figure 3).

Planning the rail tunnel for Light Rail operation would allow the line to pass through Parramatta at street level - mixed with pedestrians and providing closely spaced stops for the convenience of passengers

In the longer term this would allow for the Light Rail to be extended to Rouse Hill along the recommended T'way (Recommendation 7) and south of Parramatta (refer to Figure 4).

**Recommendation 6. Complete of the Castle Hill bypass**

The completion of the Castle Hill bypass is an essential part of creating a vibrant town centre and should not be delayed. It will also allow for the centre to accommodate the WebNET bus services. (Ed Note I am not sure where the funding stands in this project, I have assumed this will take about 5 years, if it can be completed in less time so much the better).

**Recommendation 7 Metro Light Rail from Rouse Hill to Castle Hill**

The justification to extend the Castle Hill to Parramatta MLR (Metro Light Rail) to Rouse Hill will occur as development is completed in Balmoral Road and Rouse Hill.

A Light Rail from Rouse Hill to Castle Hill would also attract a few more passengers to the Castle Hill - Parramatta line. Residents near Windsor Road would still find the Rouse Hill - Parramatta T'way a more attractive way to reach Parramatta.

Our figures justify a number of Light Rail services radiating from Parramatta. In the medium term the Castle Hill services could be extended to Regents Park and later to Bankstown and possibly Hurstville. Another direct connection could be to Wetherill Park. The Castle Hill Line could also be connected (at or near Victoria Road) to a new MLR line connecting to the Carlingford Line and extended to Epping (See also Recommendation 8).

And, following the lead from Brisbane, **it is recommended that Light Rail track should be embedded in the roadway of the T'way between Castle Hill and Rouse Hill ready for conversion to an Express Light Rail service between these centres and uncovered when Light Rail is required** (Detailed analysis has not been completed for the date when this is likely to be viable).

**Recommendation 8 Express Light Rail from Castle Hill to Macquarie Park.**

The final three recommendations are longer term and possibly less urgent than recommendations 1 through 7, however they do place future access to the NW Sector in a Metropolitan context.

The current way to reach the City by express service is to use the M2 bus services; this has been taking longer and longer due to congestion. Improvements in Recommendation 2 would reduce the travel time to a reliable journey of 40 minutes or less. This time would not have been achieved by the NW rail Line and is unlikely to be achieved by the NW Metro (in spite of the hype). The demand from the Rouse Hill/Epping corridor to the City and to other stops along the way (Macquarie Park, Chatswood, and North Sydney) will be sufficient to support 40 buses an hour (about 80% more than now), or 7 small Light Rail Cars, or less than 2 trains per hour. **Hence my well known opposition to building the NW Rail line or the NW Metro, firstly they are not supported by demand and secondly they do not provide an express service.** Further; they are too expensive for what is required, they do not provide the level of service required for long distance travel and they would take funds from other more deserving **local** projects, such as those discussed here, indeed my submission to the Federal Government indicates ways in which an entire network of WebNET buses can be completed with numerous T'ways; plus two Light Rail Lines and one Express Rail line through the City for a budget of less than the NW Metro. This does not stack up.

Another options considers it would be relatively easy to convert the M2 Transit Lanes to MLR from Windsor Road to Epping and use the Castle Hill-Parramatta LRM to connect

with Castle Hill thereby linking the Castle Hill/Rouse Hill corridor to Epping. This could also be extended to Macquarie Park. Demand would need to double (beyond our estimates for 35 years) to support a viable conversion of the Express bus services to Light Rail.

And, if completed, then passengers would be required to change at Macquarie Park and would still find the Express bus services through the City quicker than the Chatswood Rail Line.

An answer to a MLR system from Castle Hill operating in the northern suburbs lies in the need for Macquarie Park to be part of the inter-regional Express Network, this is discussed below.

**Recommendation 9 Macquarie Park as a stop on the Express Line from Gosford to the City.**

Referring again our submission to the Federal Government we noted that the only congested rail line not addressed in our $14.2b (extended) package - which included the Castle Hill Line and the Light Rail network from Parramatta - was the North Shore Line between Chatswood and the City. The submission did include an Express line under the City from Central to terminating temporarily in the north of the City and building an Express line from Hornsby to Gosford; but our self imposed budget limit precluded its extension to Chatswood and thence Hornsby. (This is perhaps a point of difference between our approach and many other who seek to spend unlimited funds on one transport system or one area. All our work is based on the best available travel

projections and a fixed average annual expenditure of $1.2b. Analysis for the SITS indicated that many reasonable operating conditions would not be met without integrating project and targets.)

We reviewed our SITS proposals as part of this submission. It would be viable and advantageous to takes a Chatswood-Hornsby Express Line through Macquarie Park (Additional cost from straight line ~ $400m).

The integrated SITS proposals (see End Note [VII]) consider that once the Chatswood/Hornsby express line is completed then the Epping/Chatswood line (which is about to open!) could be converted - at very little cost - to a more efficient, flexible and frequent MLR Service.

In this way the Chatswood-Epping Line could be connected to the M2 Epping-Castle Hill Express Light Rail and provide good access to Chatswood without the need for interchanging. Converting to MLR would allow bring in a proposal to extend the Carlingford Line (MLR) to Epping thereby providing a good, but local, line from Parramatta to Chatswood.

But note; the closest Express Rail line to the City from Castle Hill if not the whole of the Hills District would still be Parramatta (9.3km) or possibly Epping via Strathfield might become more attractive; Macquarie Park is further still at 11.6km. This reinforces the recommendation (5) for a Metro Light Rail between Castle Hill and the express services at Parramatta.

**Recommendation 10** **Express Rail Service from the Richmond Line to the City.**

The final recommendation concerns the future residents of the NW sector more than the existing residents. Upgrading the Richmond Line to two lines will provide the capacity to accommodate the six trains an hour generated by journeys from the additional development.

Our submission to the Federal Government includes a medium term recommendation to increase the capacity of the express lines on the Western Line to the City. One of the performance measures that determined the SITS rail system was to provide direct express services from all stations more than 25 km from the City. The six trains an hour from the Richmond Line can be accommodated on the Express Lines to the City thereby fulfilling the stated objective for rail performance.

These Express Rail Services plus the network of T'ways with express buses through the Western Suburbs will be used by buses from Castle Hill and Rouse Hill and will combine to make a highly connective, efficient and viable public transport system for the new and the existing areas of the NW Sector.

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[I] End Note I

**Selected excerpts from the Submission to the Federal Government Infrastructure Inquiry**

**Introduction (Part of)**

The base line for an increase in demand for public transport will be in the order of 2% to 5% a year. Public transport demand will increase in every neighbourhood in Sydney and not just those experiencing a growth of population.

It is likely there will be a small decrease in the use of cars for a few years, as has happen in other fuel price surges. By the time the economic situation is more stable and travel starts to increase again, climate change may have redefined attitudes to travel and this is likely to further increase the demand for public transport and continue to restrain growth in use of cars.

**SUMMARY OF SHORT TERM STRATEGY ( In Federal Submission)**

- The start of a complete network of regional bus services including small T'way works.
- Two metro lines through the City.
- One freight line from St Marys to Enfield doubling with a Transitway from St Marys to Wetherill Park
- One Transitway to Southerland and through the Airport.
- Substantially increase the capacity of express train lines to the City (various works).
- One new Express Line from Central Station terminating in the City.

The total for Plan Z is $9.2b only ¾ of the NW Metro and could be completed over the next 10 years (2018) about the scheduled completion of the NW Metro.

(Note; further works were recommended to extend the package, some are referred to in the text)

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[II] End Note II

Accessibility and viability

Some idea of the flexibility of this proposal is that when drawing a ring around the main catchment to Castle Hill (4.5km) there are no less than 13 different roads used to cross this ring. E.g. when open space is deducted the buses will enter the Castle Hill catchment about 1 km apart thereby providing a convenient service for most residents.
The routes are essentially feeder-buses to centres strung together to make each one part of an inter-regional network. **The viability of each route depends on having some sections of the route that are very busy to "subsidise" the weaker sections in suburban streets.**

[III] End Note III

Services in and around Castle Hill could include:

Three services which would provide direct access to Blacktown, the closest other regional centre for many residents. Two routes would pass mostly through residential streets and one would follow the T'ways through to Balmoral Road (see below) and Sunnyholt Road.

These services would provide direct access for about 30% of residents between their house and Blacktown, useful even for the occasional trip. Most of the remaining residents would be required to change at Castle Hill waiting less than two minutes, or transfer from other services crossing the T'way service (5 min wait); OK for going to work or visiting a friend, less attractive for occasional trips .

Other services would connect Castle Hill to Hornsby (1), Parramatta (2 operating every 3 mins), Macquarie Park (4) and Penrith (2).

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[IV] End Note IV

Not all services would focus on the nearest regional centre, some routes would cross through a region. E.g. Some of the services from Rouse Hill would pass within 4.5km of Castle Hill without going through Castle Hill and similarly some Castle Hill services would cross the "catchment" of Rouse Hill. (In fact the catchments are not self contained - residents travel to many places). The routes crossing catchments would create almost a grid of buses on suburban streets. These would cross at numerous intersections and thereby increase access within a locality without the need to go via the nearest centre. It will take some time before this opportunity is fully understood by residents.

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[V] End Note V

**Castle Hill Rouse Hill and Norwest as a triumvir**

There is an interesting and somewhat unique synergy between Castle Hill, Norwest and Rouse Hill that is of interest in transportation planning. Rouse Hill has been located by Government and will be supported as it expands; Norwest is developing as a community place run almost entirely by larger private enterprise, and Castle Hill is the centre of local government and the wily establishment of the Hills District with local planning in control. They are in competition; none likely to retract and none strong enough to dominate - in spite of Government plans. They will work as a triumvir to the advantage of residents who should find a wide range of attractions at each place in much the same way as residents of the inner suburbs have the choice of many centres. There will be movement between the centres for all sorts of reasons: entertainment, personal business, work, comparative shopping and just because they are closer than typical centres. Add The Hills Centre as a recreation and entertainment hub, Victoria Road for Factory outlets, work and services and the string become stronger.

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[VI] End Note VI

**Movement between regional centres.**

The movement between Castle Hill, Rouse Hill and Norwest is entirely different to movement between regional centres or between centres and the CBD. Here we are looking at the possibility of local residents going to their nearest centre on foot, by bike, car or public transport and then moving between centres. This is similar to Oxford St or Newtown. It's not quite the same because there is no strip of activity and the distances are longer making acceptance to use public transport harder. The ideal transport for this situation is closely spaced stops with (reasonably) frequently services that reduce the walk/public transport time between the nodes of activity. For example; most of the offices in the Norwest are relatively isolated from the centre and two or three stops would be preferred for short journeys. E.g. public transport is less attractive between Rouse Hill and Norwest if there is a 15 minute walk at one end.

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[VII] End Note VII

## SITS Sydney Integrated Transport Strategy.

SITS was prepared over a two year period (2004 to 2006) and has continued to be presented to government and non government organisations. It was adopted as the Friends of Sydney for discussions at public meetings in 2007. A presentation won the CILTA National Achiever Award in 2007.

SITS was prepared using travel data and 30 year population projections obtained from the Government Metropolitan Strategy (with a few changes). The 30 year program was based on continuing the existing rate of expenditure on transport infrastructure - $1.2b per annum. A number of projects could not be included in the 30 year plan and plans were dovetailed into a "complete" 40 year plan.

The proposals were based on achieving performance standards; e.g. seating all passengers on trips over 15km, express services for all journeys over 25km; 90% of households and workplaces within 800m of a 10 minute bus service and 5km of a congestion free roadway; the capacity of each public transport route to be such as to operate full with not less than six services an hour (i.e. Not over designed); congestion tolling on all tollways and motorways (which actually makes them more competitive with public transport).

The networks proposed in the SITS 25 year plan; in approximate order of greatest achievement for cost, are; the 133 WebNET bus routes; converting some inner suburban lines to Light Rail Metro Lines (3); New Metro Light Rail lines from Parramatta (4) and the City (5) using a mix of streets, T'ways and tunnels; Freight Rail Lines (3),

Express Rail lines (3), connecting existing tollways (2); new tollways (3), and light rail (Street cars) (2).

SITS appears to have been successful in helping public discussion, to introduce the Metro into Sydney, (but not to Rouse Hill), to provide an option for Victoria Road and the proposed Fast Train to Penrith, and more recently the proposed introduction of maxi buses passing through the CBD rather than terminating.

For more and for diagrams visit www.stap.com.au

**Figure 1** **Draft of a Route Map for WebNET for Castle Hill including Rail Lines - 1 - 5years**

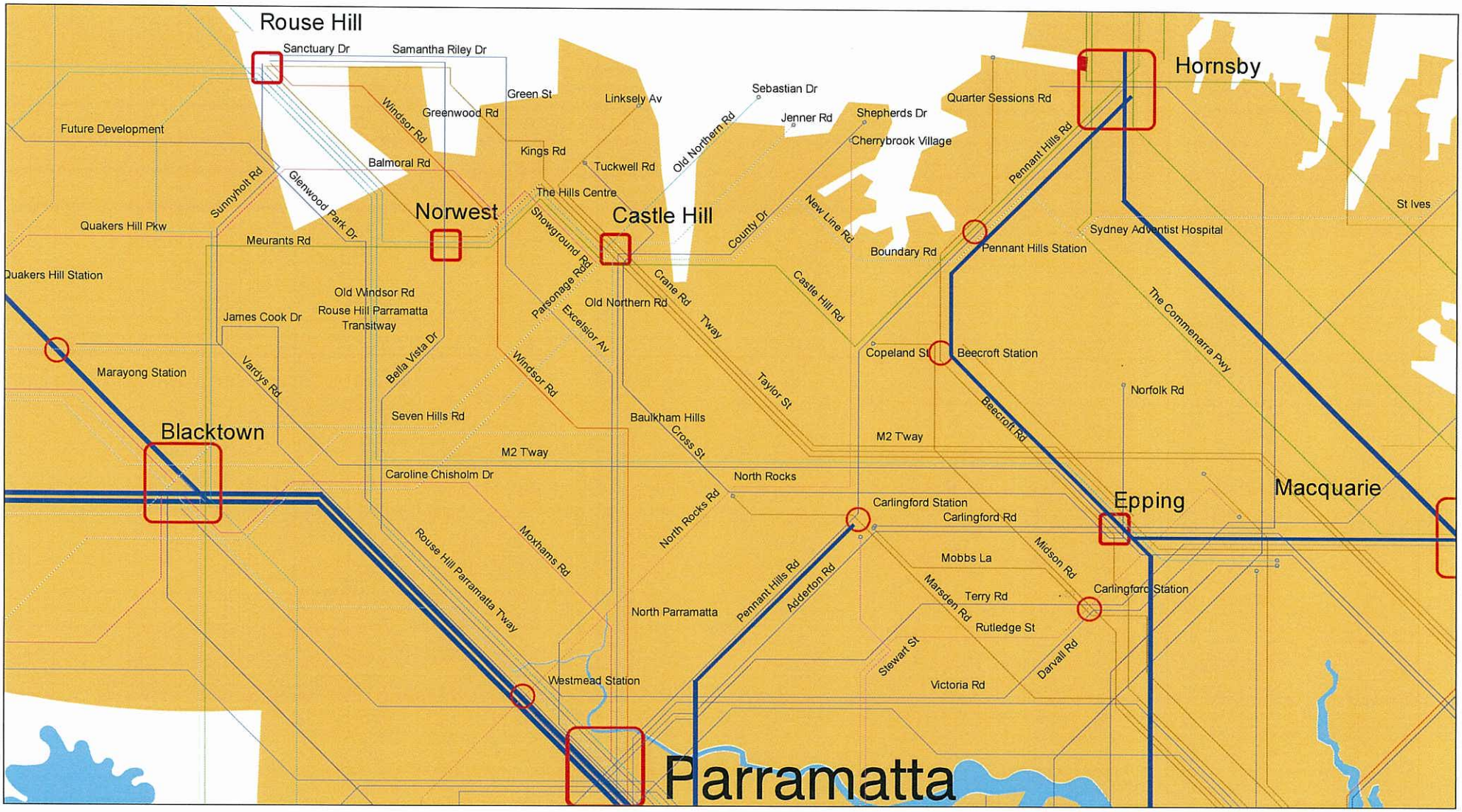


**Figure 2** **Recommendation for additional T'ways 1 - 5 years**

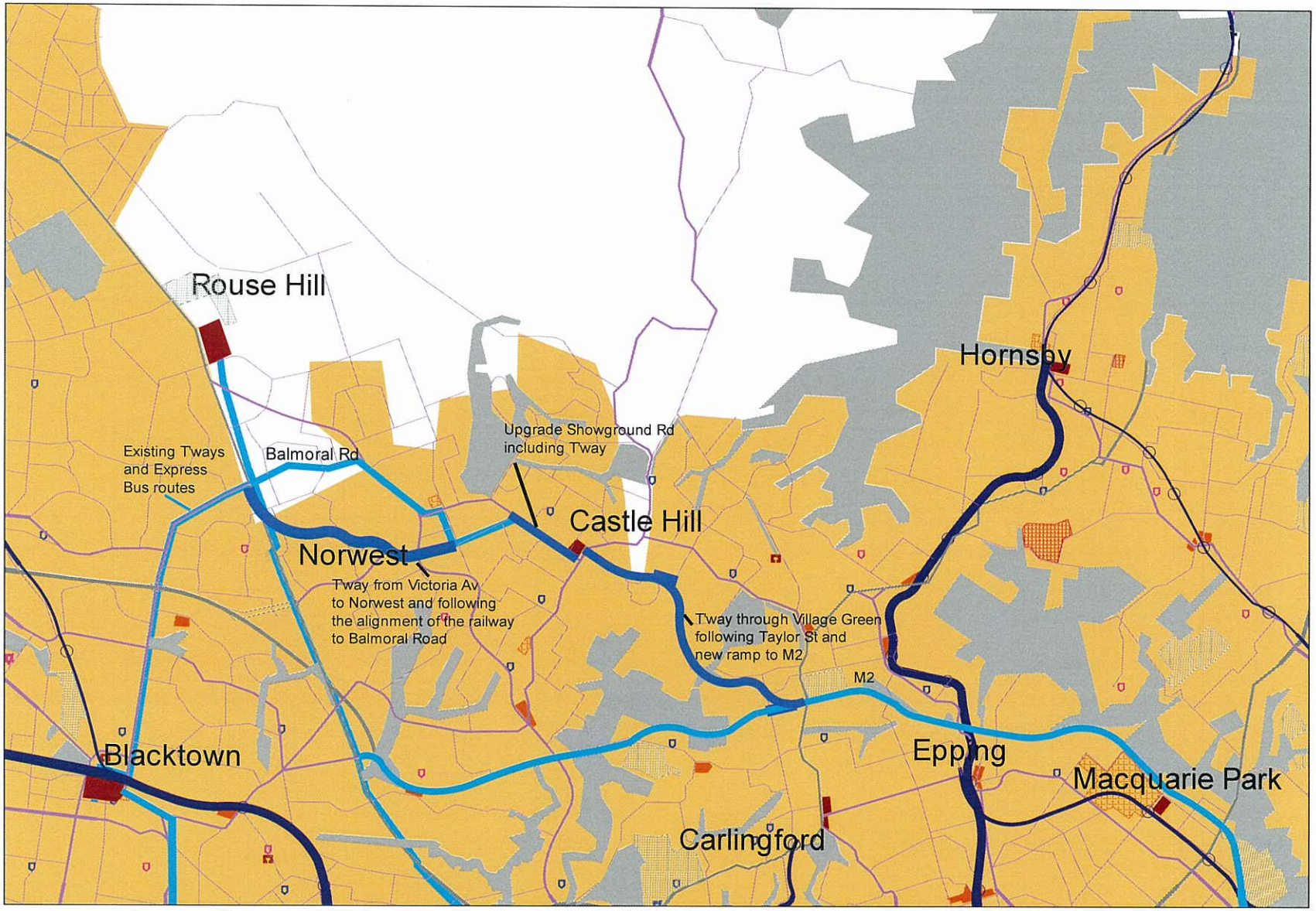


**Figure 3** **Recommendation for Light Rail Metro between Castle Hill and Parramatta - 5 - 10 years.**

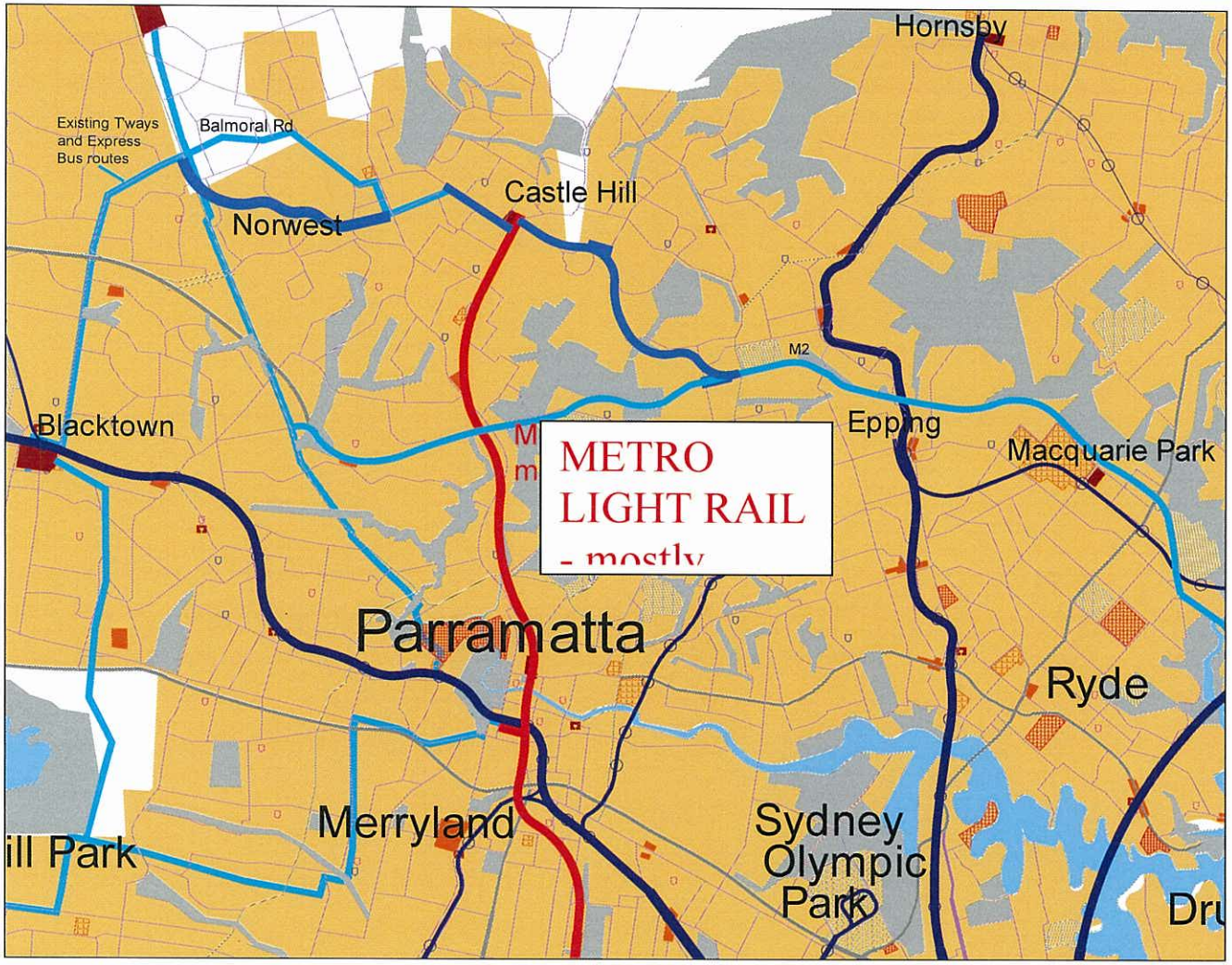


**Figure 4** **A completion of Metro Light Rail System from Parramatta and Chatswood and Express Rail to Macquarie Park and Epping.**

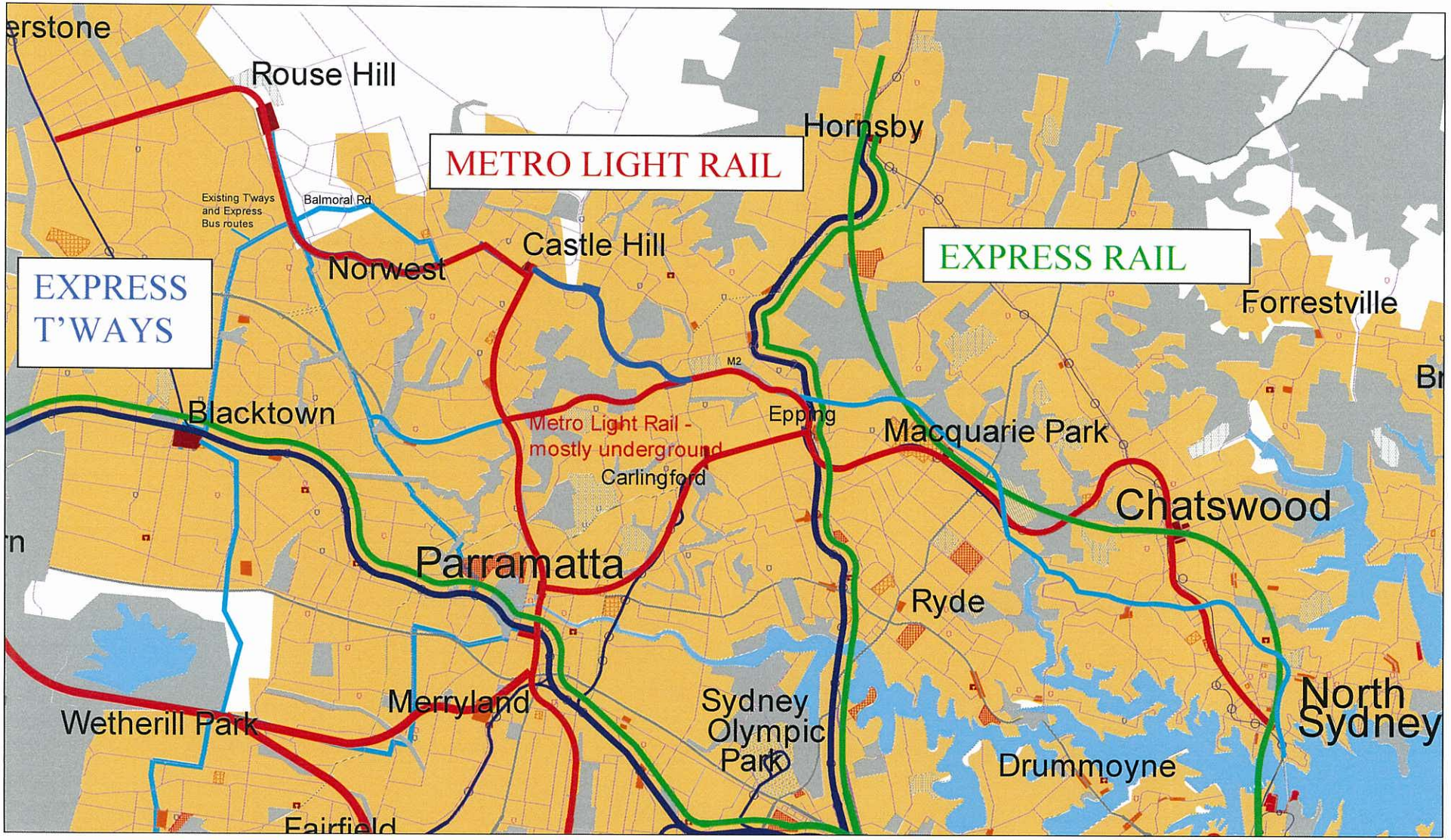


**Figure 5** **Illustration of proportion of urban area within 400m of WebNET in Castle Hill catchment - within 5 years**

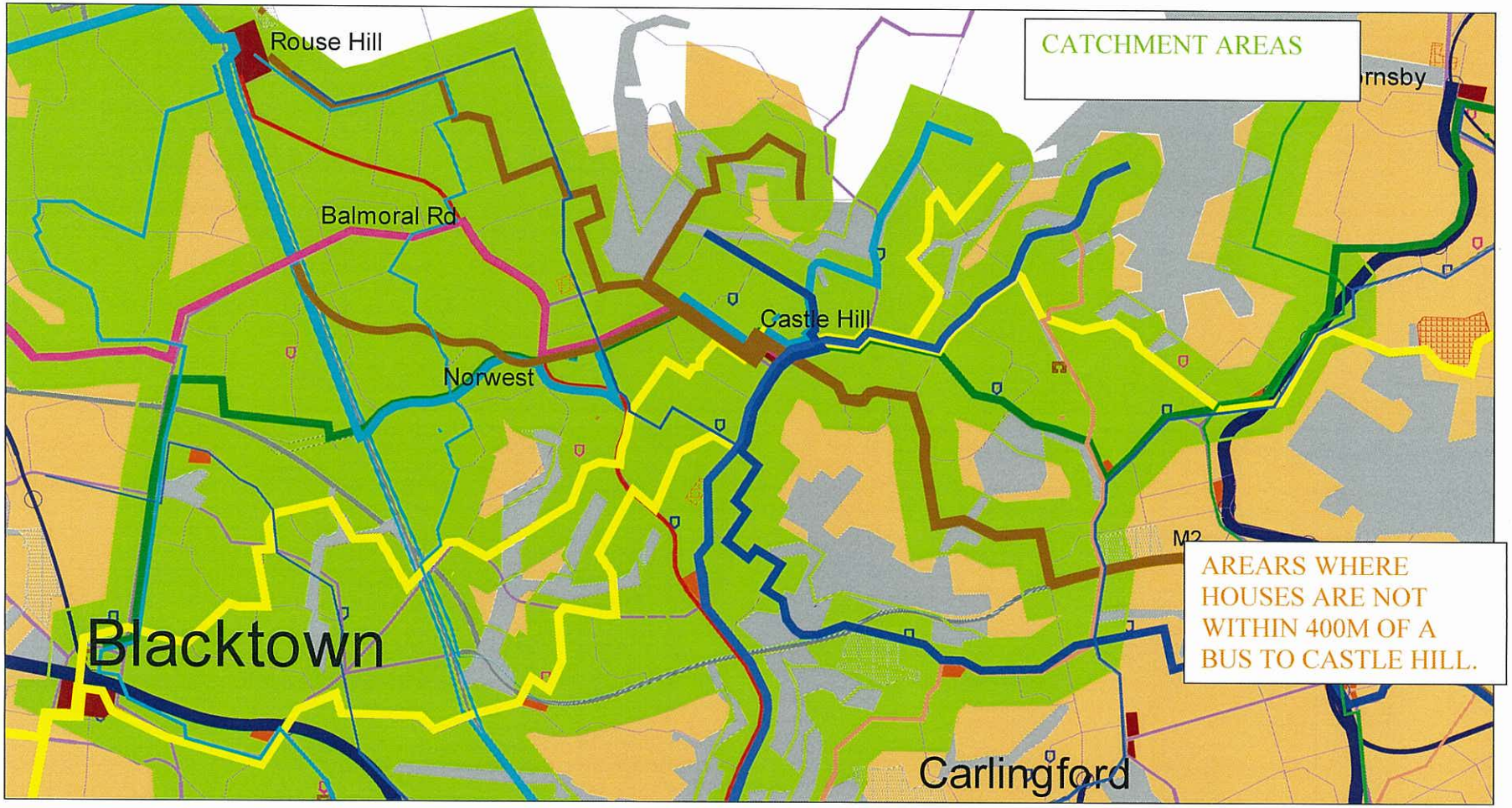
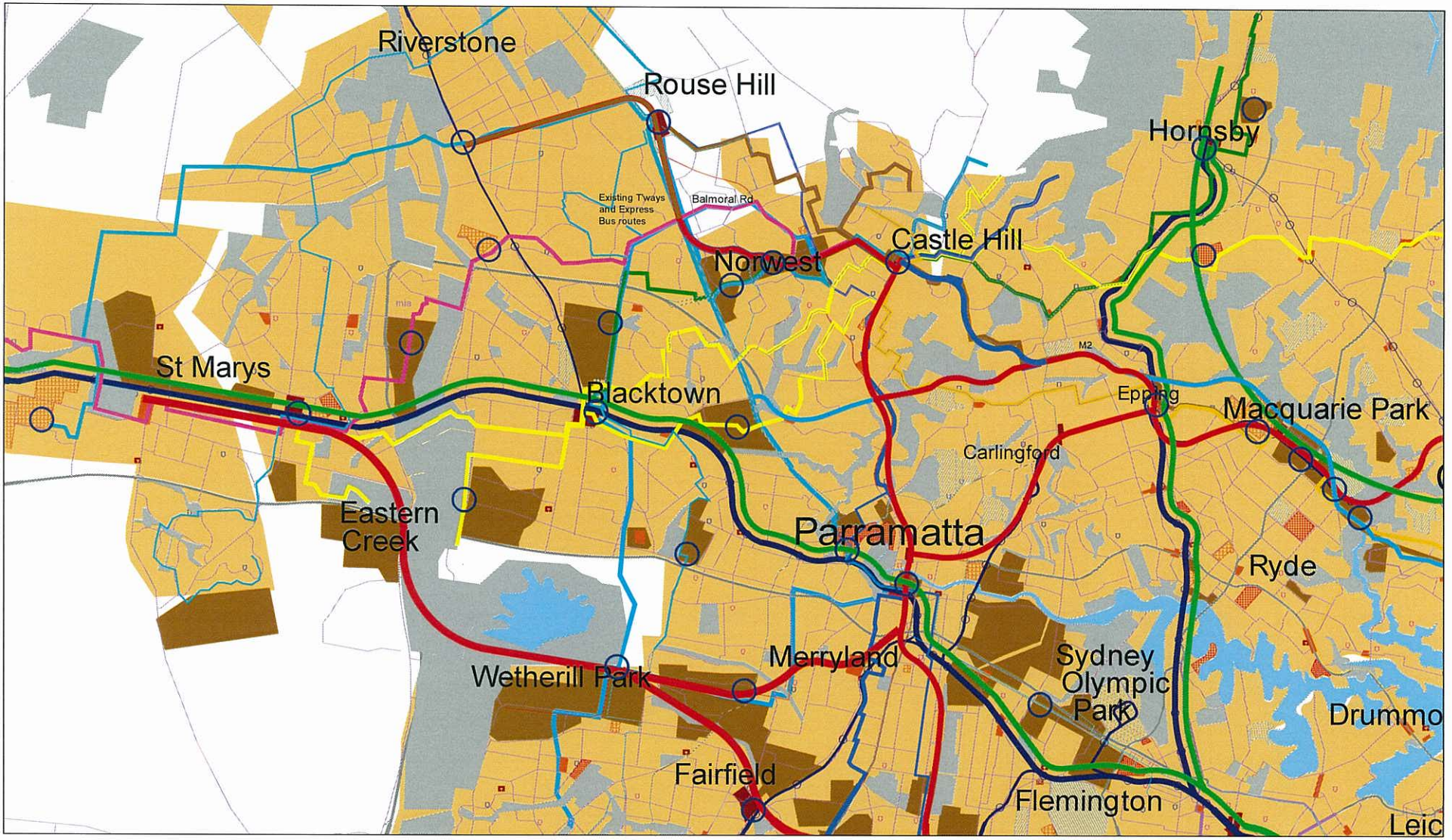


**Figure 6 Map of workplaces (Brown), Hospitals, adult education and access from Castle Hill.**




# *CHRIS STAPLETON*

## *Curriculum Vitae*

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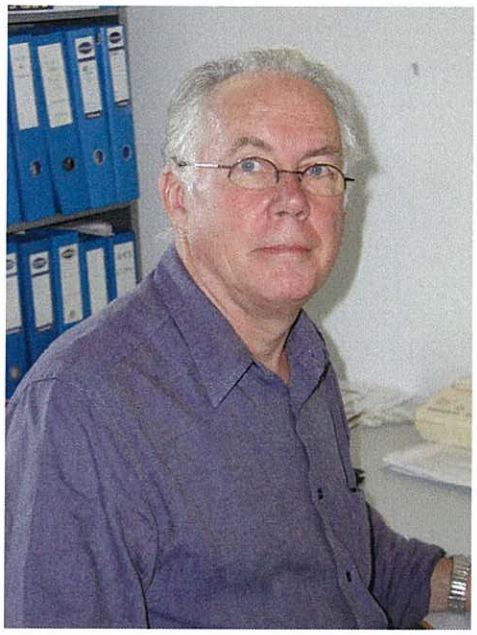
**Education**



Master of Built Environment, 1993 University of Technology, Sydney.
Diploma of Civil Engineering, 1965 Brighton College of Technology, Sussex, England

**Qualifications**

Chartered Engineer
Fellow of the Australian Institute of Traffic Planning & Management
Member of the Royal Australian Planning Institute NSW Chapter
Member of the Institution of Engineers Australia

**Employment**

| | |
|---|---|
| 1965 -1971 | Freeman Fox Wilbur Smith & Associates; London, Europe, Taiwan, and Malaysia |
| 1971-1975 | Ove Arup & Partners; Sydney, Singapore. |
| 1975 - 2008 | Stapleton Transportation and Planning Pty Ltd; Australia, Abu Dhabi, Belgrade, Iran, China, Kazakhstan, Philippines (Working also during this period as Stapleton and Hallam and Christopher Stapleton Consulting). |

**Summary**

Chris Stapleton has 40 years experience of transportation planning and is widely travelled bringing a cultural and urban appreciation to transport planning.

His work is often on the edge of progress in integrating travel management with urban design, and adaptive road designs for all road users.

He is variously described as an *opportunist planner* using development to improve transport; a *transportation architect* for sculptured three dimensional designs and *as "nothing like a typical traffic engineer"*, thank goodness! Recent projects have won awards in Australia, the National Achiever of the Year CILTA 2007; China; and the USA, CNU 2006 Regional Award.

# CURRENT AND RECENT PROJECTS

## CITY PLANNING

**Capital City, Abu Dhabi,** Urban Planning Council, UPC, 2008.

**Almaty G4 City extension,** Kazakhstan KannFinch 2007.

**Al Ain Municipality Planning Charrette,** Abu Dhabi Emirate, UAE 2007.

**Sydney Integrated Transport Strategy [SITS],** Friends of Sydney, 2007.

**SITS systems used in: -**

**Sydney Airport Metropolitan Strategy Submission,** 2007

**Proposed 12000 employee South West Business Park,** 2007

**Castle Hill Civic Centre,** Baulkham Hills Shire Council, 2007

**University of NSW 2020 Master Plan,** with DEGW for UNSW, 2005

**SW Sector Master Plan, Enquiry by Design,** Dept. of Infrastructure, Planning and Natural Resources (DIPNR), 2003

**NW Sector Master Plan, Enquiry by Design,** DIPNR, 2003

**Taiyuan New City,** Taiyuan City Council, 2004

## INNOVATIVE STREET MANAGEMENT

**Woolloomooloo Pedestrian Strategy,** with Graeme Yahn for City of Sydney, 2008.

**Nelson Bay Beach Front,** with Rohan Dickson and Associates, Port Stephens Shire, 2007

**Orchard Road,** Competition with Lawrence Neil [BVN] for Singapore Government, 2006

**Mt Albert Road,** with Annand Alcock, Auckland City Council, 2006

**Ponsonbury Road,** with Annand Alcock, Auckland City Council, 2006

**Parramatta Road Urban Design Strategy Sector 1,** with Russell Olssen and Associates and PRA for Leichhardt and Marrickville Councils, 2005

## URBAN EXTENSIONS

**Dubbo 2050 Planning & Transportation Strategy,** Dubbo City Council, 2008

**Oran Park Urban Design Review** (Sydney SW Sector), 2007

**Turners Road Urban Design Review** (Sydney SW Sector), 2007

**Edmondson Park Design Workshop** DIPNR, 2003.