

SUBMISSION IN REPLY TO THE ENVIRONMENTAL IMPACT STATEMENT
OF THE PARRAMATTA LIGHT RAIL – STAGE 1 CURRENTLY ON
EXHIBITION

I am making this submission as a private citizen.

I have made no significant donations to political parties in NSW.

Kind Regards



SUBMISSION ON THE ENVIRONMENTAL IMPACT STATEMENT OF THE PARRAMATTA LIGHT RAIL PROPOSAL: CARLINGFORD TO WESTMEAD.

I am no great fan of light rail as an on-street transportation mode, despite light rail's trendy image of being the latest 'must have' ultra-modern transport investment. The idea of reintroducing a largely on-street tramway network onto Sydney's main roads is not even 'so last century'. It is the century before that! Where there is no existing easement to separate it from heavy traffic, light rail as a transport panacea is over-hyped and far too expensive. Indeed many of the arguments against it can be found in any introductory economics textbook, in the section on fixed and variable costs.

Moreover the huge cost, in money, construction time, and disruption of having to locate and separate under-road services makes it uneconomic unless accompanied by a very strong potential passenger demand and a regional strategic development rationale. These costs dictate that embedding light rail in kilometre after kilometre of our major arterial roads is a very poor transport policy solution. The future extension of embedded light rail just continuing up the Windsor Road, or trundling down the undulating Carlingford Road is a planning recipe for transport failure. Without separation, congestion costs would be horrendous. Loss of lane capacity would also result from accommodating the required turning radii and platform space. It is also noted that there are safety issues entailed in having crowded platforms where people stand like penguins on an ice floe, exposed to traffic. Not only the risk of an accident, but also the potential as a vehicular terrorism target must be considered, and appropriate safety measures designed in. A public safety requirement that will also require even more of our scarce public streetscape.

Now I recognise that the world over, transport planners developing light rail projects have acquired a certain degree of arrogance from the observation that general vehicle traffic will inevitably decline with the advent of an imposed light

rail. However while that may be comforting to project-centric promoters of light rail, it is deeply disturbing to those who take a more holistic view of transport planning in complex urban areas. In cities such as Sydney with only fragmented grid patterns in its urban form and function, there is often nowhere for that traffic to go. I mention this because much of the Parramatta Light Rail Environmental Impact Statement is predicated on the belief that Carlingford to Westmead is only stage one, and that on-road extensions are bound to follow. Planning must seriously question at the outset, how much should be on main arterial roads?

Having said that, modern light rail does have a great deal of strengths as well as weaknesses. It has a much greater capacity per vehicle than buses, typically 3 to 5 times greater. Which allows the better handling of peak period demand. Though when removed from a dedicated right of way, light rail is generally slower than rubber wheeled buses, and subject to gradient restrictions. Light rail is also less flexible and with higher operating costs than buses. Though those operating costs and construction costs of light rail are considerably less than for heavy rail. There is also the chameleon-like ability of light rail to change and adapt its performance in different conditions. It can run at high speeds with a dedicated right of way. Then operate among traffic in busy streets. Being a tracked vehicle it can run at higher speeds on smaller footprints of straight and gentle curves. This makes light rail able to operate in tunnels in cities, such as San Francisco and Los Angeles.

Another advantage of rail is its ability to promote investment in higher density development and have powerful economic multiplier effects. Rail is more assuring to its customers, seen as being a more stylish and up-market transport mode than buses. Light rail is able to capitalise on stringing together strips of potential rights of way and public streets to produce a viable transport link. Such potential assets in congested urban areas are worth hundreds of millions in unlocked value.

Still a number of criticisms must be levelled at the exhibited plans for the Carlingford – Westmead Light Rail.

The short-run business case is very weak.

For this Stage 1 a cost-benefit analysis is not favourable to it as a stand-alone project. Growth in population and employment numbers don't always translate into significantly higher public transport patronage. In recent years NSW Trains ceased western line Intercity trains stopping at Westmead because of low demand. For the Westmead Hospitals, much of hospital employment is outside a set 9 to 5 pattern. Employees have a strong perceived need for a car and transport flexibility. A plot of the geographic residential location of those staff will reveal that apart from a few relatively small concentrations, there is a remarkably wide dispersed spread of those staff members. Moreover only a minority of those staff could reach the hospital on a single public transport journey.

Students at the Westmead campus of Western Sydney University do have a much greater public transport usage. Though their home locations are also dispersed, and many are juggling full and part-time work with their studies so their pattern of transport use can also be irregular, and the car is the preferred mode of transport. Also present transport links from Parramatta to Westmead particularly T-way bus services and heavy rail, are much faster and more frequent than the proposed light rail via North Parramatta.

The long run business case for this Stage 1 Light Rail is heavily dependent on vague and uncertain plans for both the extension of light rail in future stages, and other heavy rail and Metro development. In particular the plans for Parramatta / Western Sydney Light Rail extensions have been made redundant by similarly vague proposals for a West Metro. While the Metro announcements continue to be ambiguous, promising to be all things to all people. One minute it is being touted as a fast route from Parramatta to the city, the next it is portrayed as an all-stops servicing of the Parramatta Road Urban Renewal and The Bays Precinct. The final form will be a compromise. Whatever the eventual operational configuration of West Metro, several conditions will remain as

'givens'. The line will serve Olympic Park Station with a possible station in the Rosehill – Camellia high-density urban renewal area.

The immediate implication of this is that a Parramatta to Strathfield / Burwood light rail line would be unnecessary and hopelessly uneconomic. Business groups and City of Parramatta Council have pushed hard for that light rail to grow Olympic Park as an employment area, to tie together an expanded Parramatta LGA, and to capture entertainment and dining business from major sporting events at the stadia. The West Metro line alone will do this. And until the Metro is completed, Grand Avenue could be extended and a 'bus only' bridge built across Duck Creek / Duck River to Holker Street, thereby establishing a direct express bus service to and from Olympic Park and Strathfield / Burwood. This also has implications as to whether even a small light rail 1.3 kilometre extension should be built beyond the planned stabling and maintenance facility to the confluence of the Parramatta River and Duck Creek / River and a possible ferry wharf unfettered by very limiting tidal and river navigation speed restrictions. This also raises the question as to whether the siting of the light rail stabling and maintenance facility in a potential zone of high density adjacent to the Rosehill Gardens Racecourse is really the best strategic location.

On this point it is also noted that the remediation of the former industrial land in the Camellia – Rosehill precinct to a standard allowing high density residential development, will take much longer than its advocates will admit to. Moreover it would be such a big project that UrbanGrowth NSW would probably want to delay its release until transport infrastructure is in place, and other urban renewal projects such as at North Parramatta, Telopea and Granville – Auburn are complete or well advanced.

So this leaves the North Parramatta – Carlingford light rail as the only practical but extremely limited part of the present plan. Parramatta to Carlingford will be relatively inexpensive, because it is largely on an existing heavy rail right of way. It will promote higher density precincts relatively close to the Parramatta CBD.

However as a stand-alone line it will have limited multiplier benefits from the investment, and almost no strategic importance for Greater Sydney. It will be sub-optimal and an example of desiring a light rail line for its own sake. Much of this attraction is because its form offers a sophisticated image of the government 'doing something'. In this, like so much of our urban planning and design there is a fixation on form, not function.

If there is to be a Western Sydney Light Rail focused on Parramatta it should have regional strategic significance for the Greater Sydney West Central District, and high connectivity to other metropolitan rail routes. A simple branch-line to Carlingford stopping just short of the watershed might approximate Total Catchment Management in hydrology, but it is very poor passenger catchment management, and is strategically very bad transport planning. If the Carlingford heavy rail line is to be converted to light rail then it should proceed the additional 3.5 kilometres to Epping Station and connect with the North West Metro. This would capture many of the benefits of the abandoned Parramatta - Epping heavy rail proposal. Though the rationale at the time for that heavy rail was to ease pressure on the main western line and to convey workers to the Macquarie Park and Chatswood business districts. A Parramatta – Epping light rail would still assist in partially achieving those objectives. But it would also become more significant for commuters from the northern districts travelling to the retail, educational and office employment opportunities offered by a rapidly growing Parramatta. It would also allow greater population increase and higher density unit development along its length. The ridge-top between Carlingford and Epping, offering city and district views, has potential for very considerable higher density and other investment multipliers resulting from this new line.

The crucial question facing the present Environmental Impact Statement evaluation is how can a steel wheel on steel rail transport route be progressed past the end of the existing heavy rail line? If it cannot be extended, then the whole light rail project should be either abandoned, or reconfigured using new

road guided, articulated, and rubber wheeled high capacity metro people moving technology. Recently a collection of inner-west councils proposed such a system for Parramatta Road. For that major arterial road it was most inappropriate. Because the turning radii and vehicle length would have effectively stripped out two of the six lanes, unacceptably reducing capacity and severely restricting bus operations in this Parramatta Road corridor. While the construction costs may be lower, so will the vehicle speeds. Therefore a light rail system would still be the preferred option, but only if it could be extended.

While the Carlingford Station site would service the existing high-density unit development, as well as interchanging with bus services on Pennant Hills Road. This is the end of the existing railway right of way, and lies at the base of a steep gradient up to the top of the ridge at Carlingford Square / Court and Carlingford Village Shopping Centre. A gradient that is obviously too steep for steel wheel on steel rail vehicles. However, there was until recently a high voltage power line easement of some 400 metres that was a potential light rail easement. Though this appears to have either planned to be or has been sold off for unit development. Which may mean that it is physically impossible to extend light rail beyond the existing Carlingford station.

Planning action right now could still save this line, particularly since this light rail route would not have to go over this ridge, but merely go by a short tunnel through shale, under Pennant Hills Road to Keeler Street. Placing a stop in the heart of the Carlingford shopping precinct, and right next to thousands of existing and planned high-density units. The gradient of this section would be manageable. Though as emphasised above the pace of redevelopment and high density unit construction could mean the route, and any practical chance of extending light rail beyond Pennant Hills Road to Epping and Macquarie Centre, could be blocked or made prohibitively expensive.

If belated planning and lack of foresight somehow doesn't physically block this

extension, then under no circumstances should light rail be run down narrow, congested and undulating Carlingford Road. The 3 kilometre route to Epping should run down Keeler Street right beside existing 5 storey unit blocks, then travel up Barellan Avenue and with the resumption of 2 to 4 single residential properties, be able to travel down Willoughby Street which is a wide level road that traverses a ridge top to a junction with Ryde Street. Here a resumption of an additional 1 to 2 properties may be necessary to create a gentle curve into Boronia Avenue. Then following Boronia Avenue to its intersection with Kent Street, Epping. Beyond this intersection, a cut and cover tunnel into the shale and clay slope of Boronia Park, under the oval, emerging onto a 250 metre raised concrete bridge that would take it over the park gully, above the southern side of the planned redevelopment of the Coles / PCC car park, above Rawson Street, and with the resumption of 3 shops, above the lane beside the Epping Hotel, then over Beecroft Road and the Northern rail lines to terminate right beside Epping Station.

If it was ever desired to extend the line to the Macquarie University / Macquarie Park precinct, then this would be a relatively straight-forward route down Pembroke Street, and along the northern side of Epping Road to Macquarie University. However with the high frequency of trains on the Northwest Metro through Epping, such an extension is unlikely to be contemplated within the next thirty years, if ever. Though transport planners would be wise to at least preserve that potential route as much as possible and to allow for higher densities along this route.

At this point it must be stated that taking this light rail route under Boronia Park and over the Epping shopping precinct is entirely necessary, and in the long run the park could actually be improved. For example by building basketball courts or a skate park under some of the spans. City of Parramatta Council has been among the loudest voices advocating for a Parramatta / Western Sydney Light Rail. If they can't put 'some skin in the game', or baulk at its intrusion into one of

their parks, then the project should not proceed. Then one would have to doubt their true belief in and commitment to the project from the start. Roads through the Epping precinct are at gridlock in the morning and evening peaks. To take the light rail on a street only route for the last 600 metres to Epping station would take an additional 10 to 15 minutes per trip in these peak periods. A time penalty defeating the whole purpose of a high frequency, high capacity light rail line. This penalty would only increase with the addition of over 8000 units into the Epping area. A street route would also make it impossible for the light rail to achieve a workable stop anywhere near Epping Station. Let alone to be able to cross the northern rail line and continue on to the Macquarie Park business area. It is also a given that because of heavy traffic volumes and congestion on Beecroft Road and Epping Road, that a street level crossing is not possible. Similarly railway tunnels under Epping Station rule out any underpass option for a light rail line.

Therefore the viability of the North Parramatta to Carlingford light rail line is effectively predicated on three premises. Firstly, that without a possible and economic extension to Epping it should not proceed in its planned form. Secondly, that without the ability of that extension to connect directly with and cross Epping heavy and Metro rail station in a timely and cost effective manner, then any plans for this extension beyond Carlingford should also be abandoned. Thirdly that without the political and planning will to complete this extension well within a decade of the completion of the North Parramatta to Carlingford section then the whole Parramatta Light Rail project would be severely sub-optimal and should also be shelved. This is because patterns of transport use of those new high-density residents would be already skewed towards car use for commuting and discretionary travel.

Assuming that a Parramatta – Epping route can proceed, then another possible strategic light rail route that should be built within the next 1 to 2 decades would be a Parramatta – Castle Hill line, again anchoring Parramatta and the West Central District to the Northwest Metro, and also potentially able to encourage

and serve over ten thousand new high density units. The optimal form and function of such a route would not be a road-embedded street-level route slavishly following busy Church Street and the Windsor Road. Rather it would use the considerable opportunities for off-road running along the eastern side of the Quarry Branch Creek, which offers the twin benefits of lower construction costs and faster running speeds. In short to use one of the great strengths of light rail: its versatility and chameleon-like ability to switch from running on an exclusive right of way to street level operation. Nor is its role on this route to be exclusively a bus replacement strategy, but rather to function as a bus complementary strategy that will actually encourage people to use public transport.

The route would then turn west out of Church Street into Fennell Street, then into Fleet Street. Before which a stop could be located to serve both the Parramatta Leagues Club, and the new Stadium and events held in Parramatta Park.

Typically the majority of stadium crowds heading into Parramatta and beyond would favour this stop. Those heading north to The Hills district will tend to go to the Prince Alfred Square stop on Church Street. Pedestrian priority pathways should also be implemented to channel crowds to and from Parramatta Station away from the congested Church Street footpaths. An imaginative sculpture trail featuring sporting heroes and historical characters may contribute to this end. While on the subject of Church Street, it is recognised that construction of the light rail line through this "Eat Street" will be extremely disruptive and there will be business, legal and political pressure for a very large compensation component. In the section between George Street and the Parramatta River this work should be limited to a 7am to 12 noon schedule, unless there are some critical operation. Alternatively the inevitable redevelopment of the block bounded by Marsden, Phillip, and Church Streets with the Parramatta River, should be timed to occur at the same time as the light rail construction.

Diversion at Fennell Street will give a more direct alignment towards the

Parramatta River crossing and access to the Westmead Hospitals precinct. Another rationale for this is to correct a major weakness in the currently exhibited Environmental Impact Statement for Parramatta Light Rail. While a route along Church Street will stimulate economic and residential investment in that somewhat depressed precinct north of Victoria Road. In its present configuration it would create congestion at the intersection of Church Street and Pennant Hills Road. Interfering with the logical development of O'Connell Street as a four lane western by-pass of the Parramatta CBD. Also the further 800 metre extension along Church Street to Factory Street is unnecessary because that alignment is already very well serviced by buses, has only limited scope for further high-density development, and any extension along that section of Windsor Road will be too costly and congested.

After turning north into Fleet Street and crossing the Cumberland Hospital / North Parramatta Urban Renewal site could be by a predominately cut and cover underground route. Effectively this would not be as an expensive and extravagant route option as it would first seem to be. There are many benefits. Visual intrusion into the historical precinct would be minimised. As would the safety issues of having a rapid light rail route through a mental health facility. The North Parramatta Urban Renewal project of approximately 2000 new residential units will have very substantial underground parking and possibly retail spaces. During construction builders would want to store huge quantities of the rich alluvial soil and then redistribute it to complete landscaping. There would be economies of scale, cost sharing and synergies. Hectares of open space and community assets could be created above the light rail rather than be lost to it. This light rail route could be effectively 'woven into the fabric' of this development, and the light rail stops developed as high capacity stations linked to all parts of this development. Sensitive heritage buildings could be avoided. My point is that the light rail and the North Parramatta Urban Renewal should be planned and built together. At the moment there is an apprehension that they could end up being separate activities.

Two stops within this precinct would serve the new residential development, and hopefully an expanded role for medical research, as well as new tourist development centred on the historical buildings such as the Female Factory and even the former Parramatta Gaol.

The old gaol is currently under the ownership of an indigenous land-council, however with their cooperation it could be developed as an interactive technology and media representation of first-contact Aboriginal culture, colonisation, penal conditions, early Parramatta life, and the Vinegar Hill convict rebellion. Besides light and sound show elements, there could be museum displays, and even some constructed early buildings such as those that existed in the former Old Sydney Town, and Sovereign Hill in Ballarat. Backpacker accommodation could also be developed there.

After crossing the Parramatta River a stop would serve the Childrens Hospital, which is only a short walk from the main Westmead Hospital complex. The planned redevelopment of the three hospital sites (Westmead, Childrens and Cumberland) mean that new all-weather elevated and ground-level travelator / moving footway technologies could be a continuous link between the hospitals, the educational facilities at Western Sydney University, T-way bus interchange, and Westmead Station. That would be the Twenty First Century transport option that correctly conceptualises this precinct as an area rather than a point to be served by transport. It must also be recognised that the considerable redevelopment of these hospitals and establishment of medical research facilities will expand the footprint of these hospitals to the west, north and east, not to the south where the present plans for the Parramatta Light Rail focuses its service. Therefore need for a high cost / high capacity light rail link from the Childrens Hospital to Westmead Hospital could be effectively redundant.

From the Childrens Hospital the route should proceed up Redbank Road to skirt the Quarry Branch Creek parkland reserves. This would allow fast off-road

running on cheap sleeper and rail track. Stops at Briens Road, Hammers Road, Moxhams Road, Churchill Drive, and Model Farms Road, will foster and service a wedge of potentially high density development between this light rail and the bus routes of Windsor Road. As well as creating park and ride opportunities for residents of Old Toongabbie and Winston Hills.

A tunnel would be bored under the M2 Motorway and continued by a cut and cover route under Yattenden Park, then to run by the western side of Windsor Road through Baulkham Hills. Noting that the bus transport hub that is Baulkham Hills not being on the North West Metro is a major strategic omission. Then travelling beside the Baulkham Hills High and TAFE sites to travel inside sections of cut and cover tunnel along the western side of Old Northern Road to the Castle Hill Station on the Northwest Metro. Such a link combined with a light rail link to Epping will provide much needed north-south rail links, reduce the imbalance of rail services north and south of the T1 Western Line axis, and maximise the strategic utility of the North West Metro.

Preserving and planning for other light rail extensions in the next 30 too 50 years would suggest that the heavy rail perway south of Camellia to Clyde should not be eradicated or sold off. In the event of a sale for high-rise development west of James Ruse Drive next to Rosehill Gardens Racecourse, it should be a DA condition that a sufficient right of way for twin light rail tracks and possible station access be preserved under new buildings over this alignment. This would offer several options. Including possible links to Granville –Clyde, an extension south down Clyde Street linking to the Sydney Water pipeline easements, and using space under the elevated M4 to create a light rail loop line around the southern section of the Parramatta CBD that could support a ring of high density development.

Optimum planning of public transport provision will be the key to managing a much larger and much denser Sydney, if it is not to become a terminally congested city. Metropolitan areas with populations of over 6 million simply won't

function well without it. Transport is the key to the provision of so many other services we expect from government, and ultimately the productivity, liveability and sustainability of our cities. Where possible those planning for Sydney's future should aim to achieve exponential benefits from their transport investments, rather than just incremental benefits.

A final word of caution politicians and planners in trying to be visionary should not get caught up in a Twenty First Century 'light rail mania'. Which has similarities to the 'railway mania' of the late Nineteenth Century. Or unthinkingly promote octopus-like diagrams of potential routes radiating out from Parramatta. Nor should we encourage the populist bleating reminiscent of Animal Farm, of "Buses bad: Light-rail good"! Viable light rail options are very limited, and are only possible with much higher population densities. Also under no circumstances should light rail be planned to run along Victoria Road or Parramatta Road. Rather government should 'bite the bullet' and rationalise the use of these and other Sydney arterial roads. Six lane roads should not be reduced to four, nor four lane roads reduced to two lanes for most of the day. Architect numbskulls and naïve politicians should not wax lyrical how Parramatta Road could be narrowed into a bicycle-friendly 'latte lane' once the West Connex is completed. Whether they are designated B-lines or BEE lines (Bus Energy Efficiency): bus priority lanes should be the norm on our major arterial roads. Thus ensuring faster bus travel times and more efficient use of transport assets.

In recent decades Sydney has developed a tradition of importing 'Transport Czars', 'Mr Fixits' and Transport CEOs from London. It is a great pity that we have not imported more yellow and red paint to restrict parking and install bus lanes, as London has done. Yet despite Transport for New South Wales appearing to almost exclusively adopt Transport for London as the source of their planning and operational models, our authorities have placed more yellow and red on the average beach than on our arterial roadways. In summary, don't see light rail as THE answer and ignore innovative, flexible bus travel options.