

Parramatta Light Rail EIS PART 1B Submission No. 1
Victor P Taffa 23 August 2017

Route 1 Parramatta Park Line

Serving Rosehill Racecourse, Westmead, Parramatta Park, Parramatta Stadium

Route 2 North Ryde Line

Serving Macquarie University, Macquarie University Railway Station (Heavy Rail only), Macquarie Shopping Centre



Bridge Road Glebe Tram Overpass, 13 April 2017 some 60 years on



Pacific Highway, North Sydney Tram Overpass, 1957 with North Ryde to have a similar Tram Overpass across part of Epping Road

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Tram Tracks in roads will be set in mass concrete such as

- Victoria Road,
- Kissing Point Road,
- Rutledge Street,
- First Avenue,
- Blaxland Road,
- Herring Road Terminus.

Parramatta-North Ryde route is a combination between a Tramway and a Light Rail Line with both on and off street running.

Parramatta Light Rail Trees

For some time people have been running the line that I will remove all trees when delivering Parramatta-North Ryde Light Rail (Low Floor Trams) with the Berejiklian Government.

Trees where removed will be replanted.

Trees where removed will have limbs or cuttings retained and replanted so the same type of Tree can grow in a new position.

What are currently called roads through Eastwood resemble nothing better than cart tracks and are an absolute disgrace that Parramatta-North Ryde Light Rail will improve and make safer for everyone.

Under my leadership all trees will not be removed.

Under my leadership trees will be planted.

In fact the Pickford Avenue-Epping Road County Road Reservation will require a tree planting strategy that would not occur if it were not for my leadership and drive in wanting Light Rail along this route instead of destroying a Heavy Railway Line.

Light Rail Depot

Marked on the proposed Parramatta Light Rail Map is a Light Rail Depot located adjacent to Rosehill Racecourse on the corner of Colquhoun Street and Grand Avenue.

Given the length of a Parramatta-North Ryde Light Rail Line and future extensions of routes 3, 4, 5 & 6 a second Light Rail Depot will be required.

The second Light Rail Depot will be located on County Road Reservation land near the Tram Overpass.

This will enable Tram Cars to start early morning services from nearby Herring Road Terminus easily and provide ample room to house Tram Cars with Staff Parking and Staff amenities.

Route 1 Names Of Stops

- Stop 1 Colquhoun Street** named after Colquhoun Street
- Stop 2 Rosehill Racecourse** named after Rosehill Racecourse
- Stop 3 Tramway Avenue** named after Tramway Avenue
- Stop 4 Robin Thomas Reserve** named after Robin Thomas Reserve
- Stop 5 Smith Street** named after Smith Street
- Stop 6 Church Street Mall** named after Church Street Mall
- Stop 7 Parramatta Park** named after Parramatta Park
- Stop 8 Park Parade** named after Park Parade
- Stop 9 Hassall Street** named after Hassall Street
- Stop 10 Westmead Station** named after Westmead Station (Stop 1)
- Stop 11 Westmead Hospital** named after Westmead Hospital (Stop 2)
- Stop 12 Westmead Children's Hospital** named after Westmead Children's Hospital (3)
- Stop 13 Hainsworth Street** named after Hainsworth Street
- Stop 14 Jessie Street** named after Jessie Street
- Stop 15 Queens Road** named after Queens Road
- Stop 16 Railway Parade** named after Railway Parade
- Stop 17 Westmead Station** named after Westmead Station (Stop 1 Return Trip),
- Stop 18 Hassall Street** named after Hassall Street
- Stop 19 Park Parade** named after Park Parade
- Stop 20 Parramatta Park** named after Parramatta Park
- Stop 21 George Street** named after George Street
- Stop 22 Parramatta Stadium** named after Parramatta Stadium
- Stop 23 Fennell Street West** named after Fennell Street
- Stop 24 Albert Street West** named after Albert Street
- Stop 25 Factory Street West** named after Factory Street
- Stop 26 Dunlop Street West** named after Dunlop Street (Near Parramatta Jail site)
- Stop 27 Dunlop Street East** named after Dunlop Street
- Stop 28 Factory Street East** named after Factory Street
- Stop 29 Albert Street East** named after Albert Street
- Stop 30 Fennell Street East** named after Fennell Street (Stop 6)
- Stop 31 Prince Alfred Square** named after Prince Alfred Park (Stop 7)
- Stop 32 Phillip Street West** named after Phillip Street (Stop 8)
- Stop 33 Horwood Place** named after Horwood Place (Stop 9)
- Stop 34 Smith Street** named after Smith Street
- Stop 35 Robin Thomas Reserve** named after Robin Thomas Reserve
- Stop 36 Tramway Avenue** named after Tramway Avenue
- Stop 37 Rosehill Racecourse** named after Rosehill Racecourse
- Stop 38 Colquhoun Street** named after Colquhoun Street

Route 2 Names Of Stops

- Stop 1 Colquhoun Street** named after Colquhoun Street
- Stop 2 Rosehill Racecourse** named after Rosehill Racecourse
- Stop 3 Tramway Avenue** named after Tramway Avenue
- Stop 4 Robin Thomas Reserve** named after Robin Thomas Reserve
- Stop 5 Smith Street** named after Smith Street
- Stop 6 Phillip Street East** named after Phillip Street
- Stop 7 Wilde Avenue** named after Wilde Avenue
- Stop 8 Betts Street** named after Betts Street
- Stop 9 Macarthur Street** named after Macarthur Street
- Stop 10 Pennant Street** named after Pennant Street
- Stop 11 Isabella Street** named after Isabella Street
- Stop 12 Bettington Road** named after Bettington Road
- Stop 13 Vineyard Creek Reserve** named after Park near Dundas Railway Station
- Stop 14 Park Road** named after Park Road
- Stop 15 Sturt Street** named after Sturt Street
- Stop 16 Quarry Road** named after Quarry Road
- Stop 17 King Street** named after King Street
- Stop 18 Albert Brown Park** named after Albert Brown Park
- Stop 19 Brush Farm Park** named after Brush Farm Park outside Brush Park Bowling Club
- Stop 20 Lawson** named after explorer William Lawson located opposite Brush Farm House
- Stop 21 Brush Road** named after Brush Road
- Stop 22 Wentworth** named after explorer William Charles Wentworth
- Stop 23 Trelawney Street** named after Trelawney Street
- Stop 24 East Parade** named after East Parade
- Stop 25 Blaxland** named after explorer Gregory Blaxland
- Stop 26 Hollis Avenue** named after Hollis Avenue
- Stop 27 Pickford Avenue** named after Pickford Avenue
- Stop 28 Orange Street** named after Orange Street
- Stop 29 Grove Street** named after Grove Street
- Stop 30 Waratah Avenue** named after Waratah Avenue
- Stop 31 North Road** named after North Road
- Stop 32 Abuklea Road** named after Abuklea Road
- Stop 33 Fay Place** named after Fay Place
- Stop 34 Agincourt Road** named after Agincourt Road
- Stop 35 Kent Road** named after Kent Road
- Stop 36 Adelphi Road** named after Adelphi Road
- Stop 37 Scott Street** named after Scott Street
- Stop 38 Herring Road** named after Herring Road
- Stop 39 Ivanhoe Place** named after Ivanhoe Place
- Stop 40 Windsor Drive** named after Windsor Drive
- Stop 41 Macquarie Terminus** named after Terminus at Macquarie University, Macquarie University Railway Station and Macquarie Shopping Centre which were all named after New South Wales Governor Lachlan Macquarie



Bridge Road Glebe Tram Overpass facing the City and Heavy Railway Tracks set in Ballast with similar design for Epping Road Tram Overpass.



Marsden Road/Stewart Street Intersection with Tram Tracks traversing grassed area and turning right down wide median in Stewart Street clear of traffic turning right.

Route 1 Placement Of Stops

- Stop 1** Catchment area for many workers
- Stop 2** Catchment area for Rosehill Racecourse and near to Camellia Railway Station
- Stop 3** Catchment area for many residents and Interchange with Tram Routes 1 & 2
- Stop 4** Catchment area for many residents
- Stop 5** Catchment area for many residents many office workers and Parramatta CBD
- Stop 6** Catchment area for many office workers and Parramatta CBD
- Stop 7** Catchment area for many office workers and Parramatta Park
- Stop 8** Catchment area for many office workers and Parramatta Golf Course
- Stop 9** Catchment area for many residents

Stop 10 Connects with Westmead Railway Station and Train services
Stop 11 Connects with Westmead Hospital and many residents
Stop 12 Connects with Westmead Children's Hospital and many residents
Stop 13 Connects with Westmead Children's Hospital and many residents
Stop 14 Catchment area for Parramatta Park and many residents
Stop 15 Catchment area for Parramatta Park and many residents
Stop 16 Catchment area for many residents
Stop 17 Connects with Westmead Railway Station and Train services
Stop 18 Catchment area for many office workers and Parramatta Golf Course
Stop 19 Catchment area for many residents, Brush Farm Park and Bowling Club
Stop 20 Catchment area for many office workers and Parramatta Park
Stop 21 Catchment area for many office workers and Parramatta Park
Stop 22 Catchment area for Parramatta Stadium, Parramatta Leagues Club and Pool
Stop 23 Catchment area for many residents
Stop 24 Catchment area for many residents
Stop 25 Catchment area for many residents
Stop 26 Catchment area for many residents (Near Parramatta Jail site)
Stop 27 Catchment area for many residents
Stop 28 Catchment area for many residents
Stop 29 Catchment area for many office workers and residents
Stop 30 Catchment area for many residents
Stop 31 Catchment area for Prince Alfred Park, office workers and many residents
Stop 32 Catchment area for many office workers and Parramatta CBD
Stop 33 Catchment area for many office workers and Parramatta CBD
Stop 34 Catchment area for many office workers and Parramatta CBD
Stop 35 Catchment area for many office workers and Parramatta CBD
Stop 36 Catchment area for many residents and Interchange with Tram Routes 1 & 2
Stop 37 Catchment area for Rosehill Racecourse and near to Camellia Railway Station
Stop 38 Catchment area for many workers

Route 2 Placement Of Stops

Stop 1 Catchment area for many workers
Stop 2 Catchment area for Rosehill Racecourse and near to Camellia Railway Station
Stop 3 Catchment area for many residents and Interchange with Tram Routes 1 & 2
Stop 4 Catchment area for many residents
Stop 5 Catchment area for many residents many office workers and Parramatta CBD
Stop 6 Catchment area for many office workers and Parramatta CBD
Stop 7 Catchment area for many residents
Stop 8 Catchment area for many residents
Stop 9 Catchment area for many residents and workers
Stop 10 Catchment area for many residents and local retail outlets
Stop 11 Catchment area for many residents
Stop 12 Catchment area for many residents
Stop 13 Connects with Dundas Railway Station and Train services
Stop 14 Catchment area for many residents
Stop 15 Catchment area for many residents and school students

Stop 16 Catchment area for many residents
Stop 17 Catchment area for many residents
Stop 18 Catchment area for many residents
Stop 19 Catchment area for many residents, Brush Farm Park and Bowling Club
Stop 20 Catchment area for many residents and visitors to Brush Farm House
Stop 21 Catchment area for many residents and visitors to Brush Farm Park
Stop 22 Catchment area for many residents
Stop 23 Catchment area for many residents and local retail outlets
Stop 24 Connects with Eastwood Railway Station and Train services
Stop 25 Catchment area for many residents
Stop 26 Catchment area for many residents
Stop 27 Catchment area for many residents
Stop 28 Catchment area for many residents
Stop 29 Catchment area for many residents
Stop 30 Catchment area for many residents
Stop 31 Catchment area for many residents
Stop 32 Catchment area for many residents
Stop 33 Catchment area for many residents
Stop 34 Catchment area for many residents and school students
Stop 35 Catchment area for many residents and school students
Stop 36 Catchment area for many residents
Stop 37 Catchment area for many residents
Short Double Track Overpass Into Epping Road
Stop 38 Catchment area for many residents
Stop 39 Catchment area for many residents
Stop 40 Catchment area for many residents
Stop 41 Herring Road 2 Platform Island Terminus with scissors cross-over Tracks
 Centrally located to Macquarie University, Macquarie University Railway Station and Macquarie Shopping Centre



Lawson Street. Brush Farm House on right hand side. Stop 24 Lawson and Tram Tracks will be located opposite Brush Farm House with footpaths, curb, gutter and drainage installed.

Route 1 Track Alignment

- Grand Avenue Centre **with Island Stops in Central Tram Reservation**
- Grand Avenue North Tracks Parallel in Centre
- Tramway Avenue Tracks Parallel with Side Stops in Centre
- Alfred Street Tracks in Centre
- George Street Tracks in Centre
- Harris Street Tracks in Centre
- Macquarie Street Tracks in Centre and **Island Stops**
- Pitt Street Tracks on **Parramatta Park Side with Side Stops in Tram Reservation**
- Park Parade Tracks **with Island Stops in Central Tram Reservation**
- Alexandra Avenue Tracks **with Island Stops in Central Tram Reservation**
- Hawkesbury Road Tracks **with Island Stops in Central Tram Reservation**
- Hainsworth Street Tracks **with Island Stops in Central Tram Reservation**
- Park Avenue **Parramatta Park Side with Side Stops in Tram Reservation**
- Railway Parade Tracks **with Island Stops in Central Tram Reservation**
- O'Connell Street Tracks in Centre and **Island Stops**
- Dunlop Street Tracks in Centre and **Island Stops**
- Church Street Tracks in Centre and **Island Stops**

Route 2 Track Alignment

- Smith Street Centre with Island Stops
- Wilde Avenue Centre with Island Stops
- Victoria Road Centre with Island Stops
- Pennant Street Centre with Island Stops
- Kissing Point Road Centre **with Island Stops in Central Tram Reservation**
- Stewart Street Centre **with Island Stops in Central Tram Reservation**
- Marsden Road **Brush Farm Park side with Side Stops in Tram Reservation**
- Lawson Street **Brush Farm Park side with Side Stops in Tram Reservation**
- Brush Road **Brush Farm Park side with Side Stops in Tram Reservation**
- Rutledge Street Centre with Island Stops
- First Avenue Centre with Island Stops. Tracks veer to right at Blaxland Road
- Blaxland Road Centre with **no** Stops
- Lovell Road Centre with Island Stops
- Pickford Avenue Centre with **no** Stops
- Woorang Street Centre with **no** Stops
- County Road Reservation Centre with Side Stops
- Epping Road Centre with **no** Stops
- Herring Road Centre with Island Stops and 2 Platform Centre Island Terminus

Alignment of county road corridor at First Avenue/Blaxland Road intersection currently has land owned by the Roads and Maritime Authority on right hand side of First Avenue at the intersection that is aimed to take county road down Edgar Street and Welby Streets.

Tram Tracks along Marsden Road, Lawson Street and Brush Road all skirts around Brush Farm Park. However as there will be heavier loadings in Rutledge Street the Tracks will traverse the centre of Rutledge Street with Island Stops and then veer to the right of First Avenue into a reservation at Blaxland Road Intersection and Tram Stop 29.

Tram Tracks along the centre of First Avenue takes into account the future Route 4 that turns left into Ryedale Road and onto Blaxland Road. Tram Tracks traverses Blaxland Road and turns right at Balaclava Road.

Island Platforms in Rutledge Street and First Avenue will be more beneficial as there will be passenger heavier loadings from both sides of the street.



Stop 37 near County Road Reservation & Fay Place.

Route 1 Scissors Cross-Over Tracks

Stop 1 Colquhoun Street Terminus **Island Stop in Central Tram Reservation**

Stop 2 Rosehill Racecourse Entrance **Island Stop in Central Tram Reservation**

Stop 3 Tramway Avenue/Clay Cliff Creek Tracks Parallel with Side Stops in Centre

Stop 11 Westmead Hospital **with Island Stops in Central Tram Reservation**

Stop 12 Westmead Children's Hospital **with Island Stops in Central Tram Reservation**

Stop 13 Hainsworth Street **with Island Stops in Central Tram Reservation**

Route 1 Double Track Diamond Junction

Grand Avenue North/Carlingford Railway Line at Camellia Railway Station

Route 2 Island And Side Stops

Stop 19 To be Side Stop in Tram Reservation on Marsden Road/Brush Farm Park

Stop 24 To be an Island Platform Stop at East Parade/First Avenue Intersection

Stop 25 To be Side Stop in Tram Reservation at First Avenue/Blaxland Road Intersection

Stop 38 To be Side Stop in Tram Reservation on Epping Road/Herring Road corner

Stop 41 To be a 2 Platform Island Terminus in Tram Reservation on Herring Road

Route 2 Scissors Cross-Over Tracks

Stop 19 in Tram Reservation on Marsden Road/Brush Farm Park

Stop 41 in Tram Reservation on Herring Road

Overhead Wiring Stanchions

Overhead Wiring Stanchions will in most cases be centre poles and span arms that holds up both overhead wires. Street Lighting and Signage if needed will also be attached to Poles where appropriate.

Light Rail in Sydney is to have Overhead Wiring with Pantographs on Tram Cars from Randwick, Kingsford and most of George Street, Sydney.

Wireless Technology is only to be used for 2 Blocks of George Street, Sydney.

Wireless Light Rail is used in very few places around the world and is twice as expensive to install as Overhead Wiring.

Next Time Tram Arrivals

Parramatta Light Rail under my leadership will have Overhead Wiring with Tram Stops to have next time arrivals for Tram services at all Stops.

Melbourne Trams has next time arrivals at every stop. Parramatta Light Rail is a combination of Tramway and Light Rail.

Overhead Wiring ensures that Track is laid a lot quicker with less disruption on streets for everyone.

Time is money and my approach will save the Berejiklian Government time and millions of dollars while delivering a world class Light Rail system.



Approaching Marsden Road beyond Stop 22 near Albert Brown Park on Stewart Street.

Types Of Tram Stops

There are 3 Types of Tram Stops referred to in this EIS Submission. These being

- Island Tram Stop
- Side Platform Tram Stop
- Terminus Tram Stop

Pickford Avenue-Epping Road County Road Reservation Tram Stop Platforms

Pickford Avenue-Epping Road County Road Reservation Tram Stop Platforms are either off set or parallel side stops.

No Tram Stops In Pickford Avenue

Stop 27 Side Platforms in start of Reservation at Pickford Avenue placed parallel.

Stop 28 Side Platforms in Reservation placed off set to both sides of Orange Street.

Stop 29 Side Platforms in Reservation placed off set to both sides of Grove Street.

Stop 30 Side Platforms at end of Waratah Avenue placed parallel

Stop 31 Side Platforms at North Road Intersection placed parallel

No Tram Stops In Woorang Street

Stop 32 Side Platforms at Abuklea Road Intersection placed parallel

Stop 33 Side Platforms at end of Fay Place placed parallel

Stop 34 Side Platforms placed parallel between Agincourt Road and Herring Road

Stop 35 Side Platforms at Kent Road Intersection placed parallel

Stop 36 Side Platforms at end of Adelphi Road placed parallel

Stop 37 Side Platforms at end of Scott Street placed parallel

No Tram Stops In Epping Road between Tram Overpass and Herring Road

Church Location Alternative

Located on the corner of Rutledge Street and Shaftsbury Road, Eastwood is St. Philip's Anglican Church with grounds and Presbytery along Shaftesbury Road.

Many years ago Uniting Church relocated from corner of Trelawney Street and Rutledge Streets, Eastwood.

Tram Tracks on Rutledge Street would simply widen Rutledge Street for Tram Tracks and safer right hand turn for vehicles and improved road lanes.

Rutledge Street already has much reserved County Road land under Reservation for a 6 lane highway that no one has wanted for decades.

St. Philip's Anglican Church will be brick-by-brick moved in a southerly direction along Shaftsbury Road. In doing this every brick will be numbered.

According to the Daily Mail news website in November 2015 a church that had suffered fire damage and vandalism was moved brick-by-brick with every brick numbered in the process and the move turned out to be a success.

St. Helen's Church in Eston, Middlesbrough, was dismantled and then painstakingly transported from its former home and rebuilt at Beamish Museum in County Durham.

This will not see the church demolished as some people are saying.

Alongside the new Rutledge Street curb and footpath will be new lawn area and gardens after the church is relocated brick-by-brick.

Intersection of Rutledge Street and Shaftesbury Road has traffic lights now yet right hand turn opportunities are limited and this only leads to more congestion.

Tram Tracks on Rutledge Street will solve problems.

In decades past Cemeteries were relocated to make way for Sydney Town Hall and Sydney Central Railway Station Tracks.

Decades of neglect in Eastwood must end and will end by Parramatta-North Ryde Light Rail (Low Floor Trams) as delivered by me with the Berejiklian Government as soon as possible.

Brush Farm Park

Currently Brush Farm Bowling Club and Netball Courts are located on the perimeter of the Park. Brush Farm Park is there for all to enjoy.

Parramatta-North Ryde Light Rail (Low floor Trams) are no reason why these activities should cease to exist. Nor is Parramatta-North Ryde Light Rail (Low floor Trams) an excuse to build the County Road that will force these activities away from their locations.

Brush Farm Bowling Club will not be in the way of Parramatta-North Ryde Light Rail (Low floor Trams).

Netball Courts

Netball Courts requires a lower level Car Park when Marsden Road, Lawson Street and Brush Road have Tram Tracks traversing with curb, gutter and drainage installed. Height of Brush Road at Eric Street is currently raised up and Tram Tracks allows an improvement to the rest of Brush Road between Lawson Street and Rutledge Street.

Currently there is a High Voltage Power Pole and some trees located in Netball Courts Car Park. During and after construction of lower level Netball Courts Car Park, area of Miller Avenue as per the photo and behind position of camera will be turned into parking spaces for 20 or more cars.

Power Pole can be repositioned when Lawson Street is widened for Tram Tracks. Secondary items can be removed. Designs for new level of Car Park ensure the safeguard of trees in the current Car Park.

Vacant space alongside the Car Park and Netball Courts facing Marsden Road can be redesigned for better use.

Area of Miller Avenue would have marked parking spaces installed before works begin on existing Car Park.

Currently when netball courts are in use, cars are parked along Lawson Street and Brush Road that will soon be upgraded for Tram Tracks, Footpath, Curb, Gutter and Drainage.



Island Platform Stop at Flinders and Swanston Streets Melbourne

Lawson Street Eastwood

Lawson Street will be upgraded with footpath, curb, gutter, drainage and Tram Tracks. Tram Tracks on Lawson Street provides the opportunity to upgrade the road that has been ignored on the basis that the County Road would be built.

Taking Tram Tracks along Marsden Road to Terry Road and right at Brush Road will hold up Marsden Road right hand turn traffic at Lawson Street for a longer period of time and be as expensive to build given the amount of spoil required to be removed along the Brush Road perimeter of the Corrective Services Academy.

Brush Road terrain along boundary of Corrective Services Academy varies greatly that would also require the removal of many more trees than there are on Lawson Street.

Gum Trees on Lawson Street impair vision when exiting the Netball Courts Car Park.

Taking Tram Tracks along Lawson Street does not hold up Marsden Road right hand turn at Lawson Street.

Lawson Street has less spoil to be removed that offsets the cost of upgrade to Brush Farm Park Netball Courts Car Park.



Miller Avenue Dundas Valley near old Dundas Council Chambers (since sold). Spoon Gutter, Concrete borders, Asphalt and marked spaces in this area from the curved gutter and up to Miller Avenue/Marsden Road Intersection will be turned into Car Parking between trees.

Brush Road between Lawson Street and Rutledge Street is currently very busy with one lane of traffic in each direction. Traffic on Rutledge Street at Shaftsbury Road stretches all the way to Lawson Street.

Brush Road Eastwood

When Netball is played at Brush Farm Park on the weekend cars are parked where Tram Tracks will go. Vehicle numbers vary however on Saturday 6 May 2017 the number of cars parked where Tram Tracks will be placed is as follows:

- Brush Road-Lawson Street (Park Side) 10 cars
- Brush Road-Lawson Street (Even Numbered House Side) 6 cars
- Lawson Street-Marsden Road (Park Side) 10 cars
- Lawson Street-Marsden Road (Brush Farm House Side) 4 cars

New Parking areas at Netball Courts and Miller Avenue will improve parking and Tram Tracks will improve road surface, footpaths, gutter, curb and drainage for Motorists, Residents and Pedestrians.

Miller Avenue Dundas Valley

Tram Tracks will traverse Brush Farm Park side of Marsden Road, Lawson Street and Brush Road. An increased number of Parking Spaces for the Netball Courts need to be found and a section of Miller Avenue, Dundas Valley that is adjacent to Marsden Road provides such answer along with an improved visual appearance for Miller Avenue.

This will result in increased traffic and pedestrian movements at Miller Avenue/Marsden Road Intersection.

Section of Miller Avenue, Dundas Valley that is adjacent to Marsden Road will be reconfigured to provide Car Parking spaces for the nearby netball courts.

This would require installation of Traffic Lights at Miller Avenue/Marsden Road intersection that is near to Lawson Street and Netball Courts. Currently at Miller Avenue/Marsden Road intersection there are Give Way lines on Marsden Road.

Traffic Lights at Marsden Road/Miller Avenue will allow people to cross Marsden Road safely. This is notwithstanding a pedestrian crossing that does exist at the Marsden Road/Lawson Street Traffic Lights at present. However when a Car Park opens in Miller Avenue a pedestrian crossing will be required at Marsden Road/Miller Avenue intersection.

When Marsden Road Traffic Lights in both directions are on red, left hand arrow comes on green for Lawson Street and new right hand lane into Miller Avenue after turning left at Lawson Street only.

Larger signage placed overhead will notify motorists of changed traffic conditions.

Green signal comes on for Miller Avenue when Marsden Road and Lawson Street Traffic Lights are on red.

There would be **No Right Hand Turn** for Marsden Road into Miller Avenue. Currently there is a Monday-Friday PM **No Right Hand Turn** for Marsden Road into Miller Avenue.

As there would be **No Right Hand Turn** for Marsden Road into Miller Avenue the traffic lights will not create a see-through effect for drivers.

Marsden Road traffic turning right at Lawson Street would have the stop line at Miller Avenue. This provides Marsden Road motorists with a clear view of Miller Avenue.

Eastwood Fire Station Fire Engine Exits

Eastwood Fire Officers do a great job. Located on the corner of Rowe Street and Shaftsbury Road, the Fire Station has 2 exits for Fire Engines. Stop line for Rowe Street is set back beyond the Fire Station. Nearby Marsden Road can also have the Stop Line set back at Miller Avenue that ensures a clear line of sight for the new set of Traffic Lights at Marsden Road/Miller Avenue intersection.

Trams And Traffic Mix

Many parts of the Parramatta-North Ryde Light Rail Line will be either off street running or in their own reservation. County Road Reservation between Pickford Avenue and Epping Road will be Trams only.



Lawson Street Intersection at Marsden Road that currently has part of a lane filled in as shown in photo. New Stop Line for Marsden Road will be set back at Miller Avenue.

Streets With Tram Reservations

- Kissing Point Road (Centre) between Kirby Street and Silverwater Road.
- Stewart Street (Centre)
- Marsden Road (Side)
- Lawson Street (Side)
- Brush Road (Side)
- First Avenue (Side at Blaxland Road Intersection)
- Epping Road (Centre)

Streets Without Tram Reservations

- Smith Street
- Wilde Avenue
- Victoria Road
- Pennant Street
- Rutledge Street
- First Avenue (Except at Blaxland Road Intersection)
- Blaxland Road
- Lovell Road
- Pickford Avenue
- Woorang Street
- Herring Road (Except at Macquarie Terminus)

Tram Tracks will mix with traffic in most streets however Traffic Lights will be synchronised to ensure a smooth separation of Trams and Traffic. These include:

- Victoria Road
- Marsden Road
- Blaxland Road
- Lovell Road
- Pickford Avenue
- County Road Reservation Pickford Avenue-Epping Road Tram Overpass
- Epping Road
- Herring Road



Side Platform Stop with Dulwich Hill Bound Tram Approaching Glebe Stop, Sydney

Victoria Road

Trams will proceed along Victoria Road from Wilde Avenue to Pennant Avenue without a Tram Reservation. Tram Stops 8, 9 and 10 will be Island Platforms located at existing or with newly installed Signalised Pedestrian Crossings.

Tram Stop 10 near to Pennant Street will have Traffic Lights that are synchronised for both Pennant Street and Victoria Road to ensure a smooth separation of Trams and Traffic.

Tram Stop 10 will be an Island Platform in the centre of Victoria Road near Pennant Street with Traffic Lights allowing passengers safe access to either side of the road.

Marsden Road

Trams will stop at Stewart Street Lights and traverse across the intersection to Stop 19 located in a Reservation outside Brush Farm Bowling Club. Trams will proceed through the intersection while traffic has the green right hand turn light from Marsden Road into Stewart Street.



Terminus Stop with Tram Route 59 waiting to depart for Airport West, Melbourne

Blaxland Road

Blaxland Road at First Avenue and Lovell Road will see Traffic stopped when Trams traverse Blaxland Road except traffic turning right into First Avenue. This will ensure that both Trams and Traffic flows smoothly without the need for a Tram Reservation on Blaxland Road as there will be no Tram Stops on Blaxland Road. Stop 25 will be in the First Avenue Tram Reservation.

Lovell Road

Lovell Road will see Traffic stopped when Trams traverse Blaxland Road. With Lovell Road widened there will continue to be two lanes for Lovell Road in both directions. There will be no Tram Reservation on Lovell Road as Island Platforms and Pedestrian Crossings looks after the safety of people. Tram Tracks will traverse the Lovell Road/Pickford Avenue Intersection and Traffic Lights may replace the roundabout which will also contain Pedestrian Crossings. Stop 26 will be near Hollis Avenue with an Island Platform.

Pickford Avenue

Traffic Lights will be installed at Pickford Avenue/Welby Street/ Graham Avenue/County Road Reservation Intersection. Trams will traverse Pickford Avenue and County Road Reservation so Traffic Lights will control safe movement of Trams, Vehicles and Pedestrians.

Epping Road

Where County Road Reservation meets Epping Road there will be a Short Double Track Overpass into the centre of Epping Road.

At Epping Road/Herring Road Intersection there are two right turn traffic lanes into Herring Road. Stop 38 will be located on the corner of Epping Road/ Herring Road Intersection.

Epping Road will be widened between Herring Road and Lyon Park Road. Tram Tracks will be parallel with the two right turn traffic lanes into Herring Road. This ensures that the Tram Overpass is of a short length and contains construction costs.

Tram Overpass is not intended to be long that goes over the whole width of Epping Road. It will be more beneficial for traffic if the widened section of Epping Road becomes road lanes and not Tram Tracks. Tram Track extension along the wide median strip beyond Herring Road Intersection towards Balaclava Road will allow for a smoother flow of traffic and make it easier to construct.

Trams turning right into Herring Road will wait at a Tram Light. When traffic turns right, Trams will have a green signal to also turn right. Trams turning left at Herring Road into Epping Road will wait at Stop 38 for the same phasing of traffic lights.



Rutledge Street alongside County Road Reservation. Light Rail will provide a safer road for Motorists and Pedestrians.

Streets Without Tram Stops

Four streets will not be having any Light Rail Tram Stops. Length of these streets to be used for Tram Tracks makes it more suitable to have stops either side of these streets.

Considerations of residents have been placed First and Foremost in the placement of Tram Stops.

Had Tram Stops been located in these streets there would have been a negative impact upon residents who lives in these areas due primarily to the relatively short length of street with Tram Tracks and loss of curbside parking. These include:

- Blaxland Road,
- Pickford Avenue,
- Woorang Street.
- Epping Road between Tram Overpass and Herring Road

Original county road as marked on current street directories included demolishing most of Edgar Street, Welby Street and Woorang Street. Impact of Tram Tracks on streets is far less intrusive and Light Rail Tram Cars are quieter than Buses.

Bus Routes

Bus routes will change to meet with Light Rail Tram services that currently do not exist. Existing Bus routes along Tallwood Avenue cater for other areas currently and these and many other Bus routes will not be affected by Parramatta-North Ryde Light Rail via Kissing Point Road, Stewart Street and County Road Reservation.

Road Rules And Curbside Boarding

In Melbourne and Adelaide and when Sydney had a large Tramway Network the road rules were such that when a Tram stopped to Pick Up or Set Down Passengers from the curbside all vehicles have to stop behind the Tram.

Parramatta-North Ryde Light Rail will not require a change in road rules to revert to previous practice.

As indicated in the Track Alignment list Light Rail Tram Stops will be either, Island, Side Stops in a Tram Reservation or Side Stops in the Trams only County Road Reservation.

Island Stops will be located near Traffic Lights or new Signalised Pedestrian Crossings.

At the Macquarie Terminus, Herring Road currently has a Signalised Pedestrian Crossing and as such no new changes will be required from what currently exists.

Intersections With Tram Tracks Veering Free Of Right Hand Turning Traffic

Tram Tracks at intersections that veers free of right hand turn lanes include:

Stewart Street/Marsden Road Intersection

Tram Tracks proceeds across intersection to alongside Brush Farm Park away from traffic turning right at Marsden Road.

Marsden Road/Lawson Street Intersection

Tram Tracks veers alongside of Brush Farm Park away from traffic turning right at Marsden Road traversing across spare land on corner away from traffic turning right at Marsden Road.

First Avenue/Blaxland Road Intersection

Tram Tracks veers to right hand side of First Avenue away from traffic turning right at Blaxland Road.

Epping Road/Herring Road Intersection

Tram Tracks comes off Over Pass and up widened Epping Road to Herring Road with Tram Tracks traversing across wide corner away from traffic turning right at Herring Road.



Stop 42 Epping Road & Herring Road Tram Tracks traverse at corner with Side Platforms.

New Eastwood Police Station

In two matters that began as unrelated are now becoming related.

On Tuesday 21 March 2017 I went into Eastwood Police Station to discuss with Police about impacts on traffic with my Parramatta-North Ryde Light Rail Line as part of my Parramatta Light Rail EIS Submission.

On Wednesday 22 March 2017 I went into Eastwood Police Station and asked Police Officers if they felt that Eastwood was deserving of a new Police Station.

On Thursday 23 March 2017 I wrote a letter to the Local Area Commander and sent a copy to New South Wales Minister for Police Troy Grant.

Eastwood Police Station opened or was rebuilt in 1965 when Jim Clough was Member for Eastwood.

On street parking is a problem for people and many blocks of units has been built in Eastwood since 1965.

Yes it is time that Eastwood Police Officers were given a new modern Police Station to work in to serve the community.

Construction costs of a new Police Station will be offset with sale of the old site. This site is also near to old Police Station in Ethel Street and alongside Light Rail providing members of the public with good access to the new Police Station.

Location of a new Eastwood Police Station could be near Pickford Avenue on County Road Reservation. This site allows off street parking for Police Officers and Staff. Police response times to incidents will improve from this new location.



Stop 31 near County Road Reservation & Pickford Avenue Intersection. Tram Tracks turns right into County Road Reservation. Traffic Lights will be installed at this 4 way intersection.

Construction Activity In Herring Road At Macquarie University Railway Station

Construction Activity of Light Rail can be managed as long as Macquarie University Railway Station remains in operation as a Railway Station for Heavy Rail Trains.

Construction Activity Preliminary Schedule Overview And Traffic Impacts

Route 1 Parramatta Park Line Construction Activity

Tram Depot and along Grand Avenue, Tramway Avenue, George Street, Alfred Street completed first as one section.

Route 1 contains much on street running that makes construction not as fast as Route 2.

- Harris Street completed as one section. Kept open to traffic.
- Macquarie Street Harris Street-Smith Street as one section. Kept open to traffic.
- Macquarie Street Smith Street-Marsden Street as one section. Kept open to traffic.
- Macquarie Street Marsden Street-Pitt Street as one section. Kept open to traffic.
- Pitt Street, Park Parade, Alexandra Avenue as one section. Kept open to traffic.
- Park Parade height increase at Domain Creek. Kept open to traffic.
- Hawkesbury Road completed as one section. Kept open to traffic.
- Hainsworth Street, Park Avenue completed as one section. Kept open to traffic.
- Railway Parade completed as one section. Kept open to traffic.
- O'Connell Street Macquarie Street-Victoria Road as one section. Kept open to traffic.
- O'Connell Street Victoria Road-Dunlop Street as one section. Kept open to traffic.
- Dunlop Street completed as one section. Kept open to traffic.
- Church Street Dunlop Street-Fennell Street as one section. Kept open to traffic.
- Church Street Fennell Street-Macquarie Street as one section. Kept open to traffic.

Park Parade

Temporary Closure Of Pedestrian Tunnel

Pedestrian Tunnel under Western Railway Line will be closed temporarily while storm water pipes are placed under Tunnel footpath and connected to Domain Creek.

Light Rail to Westmead Hospital will cost money to overcome problems that others have put off for decades.

Domain Creek runs into Parramatta River through Parramatta Park, under the Western Railway Line and under Park Parade.



Pedestrian Tunnel on left of Park Parade with Domain Creek Overpass on right.



Park Parade narrows with Road Subject To Flooding Signage on Left

Road Subject To Flooding signage

Pedestrian Tunnel access under the Western Railway Line must be retained yet there is a Road Subject To Flooding sign along Park Parade.

Increased height of road surface for Tram Cars will improve condition Domain Creek overpass and footpaths on either side of Park Parade.

Park Parade would be raised up with a retaining wall built at curb and footpath at end of Pedestrian Tunnel with a higher level road surface to eliminate flooding risk so Tram Cars can serve Westmead Hospital safely.

Mons Avenue Ryde Council Drainage Tunnel

Ryde Council that has been slated for merger built a Drainage Tunnel under Mons Avenue and Meadowbank Park into Parramatta River.

This solution of a similar distance is what should have occurred for Domain Creek and Park Parade a long time ago.

Park Parade from Pitt Street in a westerly direction rises upwards and then descends to where Domain Creek is and then rises upwards towards Westmead Railway Station.

Light Rail along Park Parade and Alexandra Avenue to Westmead Hospital is needed however a Drainage Tunnel is required so Park Parade can be raised up.

Route 1 Permanent Two Way Traffic Changes

There will be a need to change sections of streets from one way to two way due to Tram Tracks being laid on streets. These include:

George Street, Parramatta

George Street between Alfred Street and Harris Street

Macquarie Street, Parramatta

Macquarie Street between Harris Street and O'Connell Street

Route 2 North Ryde Line Construction Activity

Route 2 contains much off street running that makes construction easier and faster.

- Smith Street and Wilde Avenue completed as one section. Kept open to traffic.
- Victoria Road completed as one section. Kept open to traffic.
- Pennant Street completed as one section. Kept open to traffic.
- Kissing Point Road completed as one section. Kept open to traffic.
- Stewart Street completed as one section. No impact on traffic.
- Brush Farm Park side of Marsden Road. No impact on traffic.

- Brush Farm Park side of Lawson Street. Road rebuilt and kept open to traffic.
- Brush Farm Park side of Brush Road. Road rebuilt and kept open to traffic. Brush Road at Eric Street is currently built up and as such road requires to be rebuilt.
- Rutledge Street and First Avenue widened for traffic first. Completed as one section.

Blaxland Road Diversions

- Blaxland Road Right Hand Turn into First Avenue unaffected
- First Avenue Left Hand Turn into Blaxland Road unaffected
- Traffic Lights installed at First Avenue/ Ryedale Road Intersection
- First Avenue Right Hand Turn via Ryedale Road, Denistone Road, Dalton Avenue
- North Bound Blaxland Road traffic diverted via Dalton Avenue, Denistone Road and First Avenue
- Blaxland Road Right Hand Turn at Lovell Road temporarily reinstated
- Lovell Road traffic turns left at Blaxland Road and diverts via Dalton Avenue, Denistone Road and First Avenue
- Blaxland Road completed as one section. Traffic diversions in place with residents access only.
- Lovell Road, Pickford Avenue widened for traffic first. Completed as one section. Kept open to traffic.
- Woorang Street, widened for traffic first. Completed as one section.
- Pickford Avenue- Epping Road County Road Reservation completed in sections between each cross street. New Eastwood Police Station is built at this time.
- Kent Road Primary School demountable moved across Kent Road and restored to operation as new building is completed. This enables Tram Tracks to be laid past school.
- Epping Road widened for traffic first. Then Ramp and Tram Overpass built.
- Tram Depot completed during construction of Tram Overpass and Ramp.
- Tram Overpass completed as one section. Installed at night.
- Herring Road to Terminus completed as one section. Kept open to traffic.

Construction Costs Savings

Costs of Construction are reduced by use in centre of 6 Lane Kissing Point Road, Stewart Street and unused county road corridor along Rutledge Street, First Avenue and between Pickford Avenue and Epping Road.

Use of unused County Road Corridor is a cost effective means of constructing the line.

Cost to build a Street Tramway is \$1 Million per km including installation of overhead wiring, Tram Stops and restoration of road surface.

Construction Costs

Education Department Budget funds new permanent building at Kent Road Primary School. Police Department Budget funds new Eastwood Police Station to be offset with sale of Ethel Street site.

Potential relocation of Rutledge Street residents to Pickford Avenue-Epping Road County Road Reservation.

According to staff at Sydney Tramway Museum a street Tramway costs \$1 Million per km include installation of overhead wiring, Tram Stops and restoration of road surface.

Pickford Avenue-Epping Road County Road Reservation Costs less than \$1 Million per km are estimated at \$750,000 per km.

Cost to relocate Brick-By-Brick St. Philip's Anglican Church, Eastwood is associated with Rutledge Street and First Avenue road widening and use of county road reservation land.

Cost to build Tram Overpass is based on Prefabricated Overpass Deck positioned on Pillars during the night when Epping Road is closed to traffic and completed overnight. Not included in cost is centre Epping Road ramp however spoil from clearance of County Road Reservation will be used in Ramp from the Tram Overpass.

Costs, time and disruption along Victoria Road, Kissing Point Road, Stewart Street and First Avenue will not be as great as along Blaxland Road or Rutledge Street.

Costs are base construction cost. In addition to Estimated Total Costs are Items such as:

- Brush Farm Park Netball Courts Parking,
- Equipment and machinery,
- Labour,
- Materials,
- Miller Avenue Dundas Valley Car Parking,
- Park Parade height raised over Domain Creek,
- Promotional leaflets,
- St. Philip's Eastwood Church relocation brick-by-brick,
- Trees and Landscaping.



Epping Road and room to widen with Tram Tracks to enter from Tram Overpass located on right of Epping Road at base of incline.

Construction Cost Savings In Light Rail Projects

Having seen cost blowouts in other Light Rail Projects, a \$69 Million purchase of a block of apartments, plus construction of a Tunnel that has pushed up the price I know that I can save Millions of Dollars for a Parramatta-North Ryde Light Rail Project.

Wireless technology has dubious benefits at double the cost to install than overhead wiring.

Parramatta-Carlingford Railway corridor will not bring the same benefits to Taxpayers that Parramatta-North Ryde will bring such as new building for Kent Road Primary School and a new Eastwood Police Station.

Carlingford Railway Line needs to be duplicated and extended to Epping and to Liverpool via the converted Bus Transitway and onto the Southern Line.

Costs to build Parramatta-North Ryde Light Rail against George Street-Randwick and Kingsford Light Rail will be comparatively more economical. This is more to do with less likely difficulties envisaged than other factors involved.

Construction along Kissing Point Road, Stewart Street, Rutledge Street, First Avenue, Pickford Avenue-Epping Road County Road Reservation and Herring Road will have less difficulty that save time and money in building this project.

Construction Work Zones

Construction work zones will be securely fenced and house items that include:

- Equipment,
- Overhead wiring,
- Overhead wiring stanchions,
- Tram Track drainage lintels,
- Tram Track to be laid,
- Staff workforce reporting areas.

All areas used to be restored once work has completed.

Routes 1 & 2 Work Zones locations are:

Zone 1 Grand Avenue Light Rail Depot

Zone 2 Tramway Avenue

Zone 3 Robin Thomas Reserve (Corner George Street & Macarthur Street)

Zone 4 Park Parade (Corner Pitt Street)

Zone 5 Park Parade near Alexandra Avenue

Zone 6 Cumberland Hospital site near Fleet Street/Factory Street

Zone 7 Prince Alfred Park (Market Street Corner)

Zone 8 Railway Parade Westmead near Park Avenue

Zone 9 Hawkesbury Road diagonal to Railway Parade

Zone 10 Bill Thompson Reserve (Victoria Road)
Zone 11 Collett Park (Pemberton Street Corner)
Zone 12 PH Jeffrey Reserve (Isabella Street)
Zone 13 Vineyard Creek Reserve (Kissing Point Road)
Zone 14 Sturt Park (Sturt Street near Kissing Point Road)
Zone 15 Reserve adjacent to Kissing Point Road/ Silverwater Road intersection
Zone 16 Miller Avenue Dundas Valley near former Dundas Council Chambers
Zone 17 St. Philip's Anglican Church, Eastwood area (Church moved Brick-By-Brick first)
Zone 18 County Road Reservation near Pickford Avenue
Zone 19 County Road Reservation near North Road
Zone 20 County Road Reservation near Kent Road
Zone 21 County Road Reservation near Epping Road
Zone 22 Centre of Herring Road between Tram Terminus and Talavera Road

Construction Timeframe

Timeframe For Light Rail Line Only

As delivered by me with the Berejiklian Government I would have the entire project finished within 2 years.

This includes geo-technical investigations and surveying.

During construction of Light Rail Line Kent Road Primary School Demountable will be moved. Demountable will be in operation as new Building is constructed.

New Eastwood Police Station will also be constructed as Light Rail Line is built. However Light Rail Line can operate as work continues on new Eastwood Police Station.

Work must commence on a new School Building and a new Eastwood Police Station during construction of the line as design, size and alignment of all Projects must be finalised.

This ensures that there will be no errors in or on any of the Projects.

Sydney Light Rail is utilising workforce and many of the same materials that will be required with Parramatta-North Ryde Light Rail.

2 Year Timeframe enables other much needed Heavy Railway Projects or Light Rail Projects to be constructed that are mindful of budgetary constraints.

Rather than drag out one project, workforce are guaranteed ongoing work if Parramatta-North Ryde Light Rail is delivered sooner rather than later.

Standards of work will not be cut to meet a 2 year timeframe. More that all Agencies will work together in a coordinated effort.

Sydney delivered a world class Olympic Games in year 2000 when pressure to meet a timeline was necessary.



Herring Road 2 Platform Terminus with scissors cross-over Tracks that is centrally located to Macquarie University, Macquarie University Railway Station and Macquarie Shopping Centre.

Given that a large part of the project is off-street running many different sections can be completed at the same time thus shortening overall time schedule.

No one else will have the same dedication to my plan as I do. Many other answers to problems that crops up while building will have solutions by me.

Tram Costs And Distances In Length

Distances calculated from Gregory's Street Directory Year 2015 grid references. Pickford Avenue-Epping Road Reservation is fenced off at present leaving inaccuracies in distance calculation.

Route 1 Parramatta Park Line Light Rail Tram Costs And Distances In Length

Grand Avenue	1Km	\$1,000,000
Grand Avenue North	500 Metres	\$500,000
Tramway Avenue	400 Metres	\$400,000
Alfred Street	200 Metres	\$200,000
George Street	750 Metres	\$750,000
Harris Street	100 Metres	\$100,000
Macquarie Street	1.5 Km	\$1,500,000
Pitt Street	250 Metres	\$250,000
Park Parade	750 Metres	\$750,000
Alexandra Avenue	500 Metres	\$500,000
Hawkesbury Road	750 Metres	\$750,000
Hainsworth Street	300 Metres	\$300,000
Park Avenue	700 Metres	\$700,000
Railway Parade	400 Metres	\$400,000
O'Connell Street	2 Km	\$2,000,000
Dunlop Street	200 Metres	\$200,000
Church Street	2 Km	\$2,000,000

Estimated Total Costs:	\$12.3 Million
Estimated Total Distance:	10.450 Km

Route 2 North Ryde Line Light Rail Tram Costs And Distances In Length

Smith Street	250 metres	\$250,000
Wilde Avenue	500 metres	\$500,000
Victoria Road	1 Km	\$1,000,000
Pennant Street	750 metres	\$750,000
Kissing Point Road	3 Km	\$3,000,000
Stewart Street	1.2 Km	\$1,200,000
Marsden Road	300 metres	\$300,000
Lawson Street	300 metres	\$300,000
Brush Road	300 metres	\$300,000
Rutledge Street	1.5 Km	\$1,500,000
First Avenue	600 metres	\$600,000
Blaxland Road	300 metres	\$300,000
Lovell Road	300 metres	\$300,000
Pickford Avenue	200 metres	\$200,000
County Road Reservation	Pickford Avenue-Woorang Street 800 metre	\$600,000
Woorang Street	250 metres	\$250,000
County Road Reservation	Woorang Street-Epping Road 1.2 Km	\$1,000,000
Tram Overpass	4.7 metre Height 30 metre Length from Reservation	\$1,000,000
Tram Ramp	Length from Overpass 600 metres**	\$400,000
Epping Road	Tram Reservation at Herring Road 1 Km	\$500,000*
Herring Road	Tram Reservation at Centre Island Terminus 750 metres	\$750,000
Estimated Total Costs:		\$15.0 Million
Estimated Total Distance:		14.530 Km

*Epping Road will be widened from Herring Road to Lyon Park Road for road lanes that enable Tram Tracks and reservation to traverse the centre which makes future extensions towards Balaclava Road easier to build.

**Tram Ramp may curve from centre to the County Road Reservation should the required gradient of the ramp be too steep.

Epping Road Tram Overpass And Approach Length From County Road Reservation

Tram Overpass is no higher than

- Epping Road Overpass across Lane Cove Road,
- Pedestrian Overpass across Epping Road near Paul Street,
- Pedestrian Overpass across Epping Road near Vimiera Road.
- Tram approach from County Road Reservation to be at grade with Tram Deck.

Height of 4.7 metres is requirement set down by New South Wales Roads and Maritime Services. Dip in Epping Road benefits design and construction of Tram Overpass.

Height

Minimum regardless of dip in road 4.7 metre

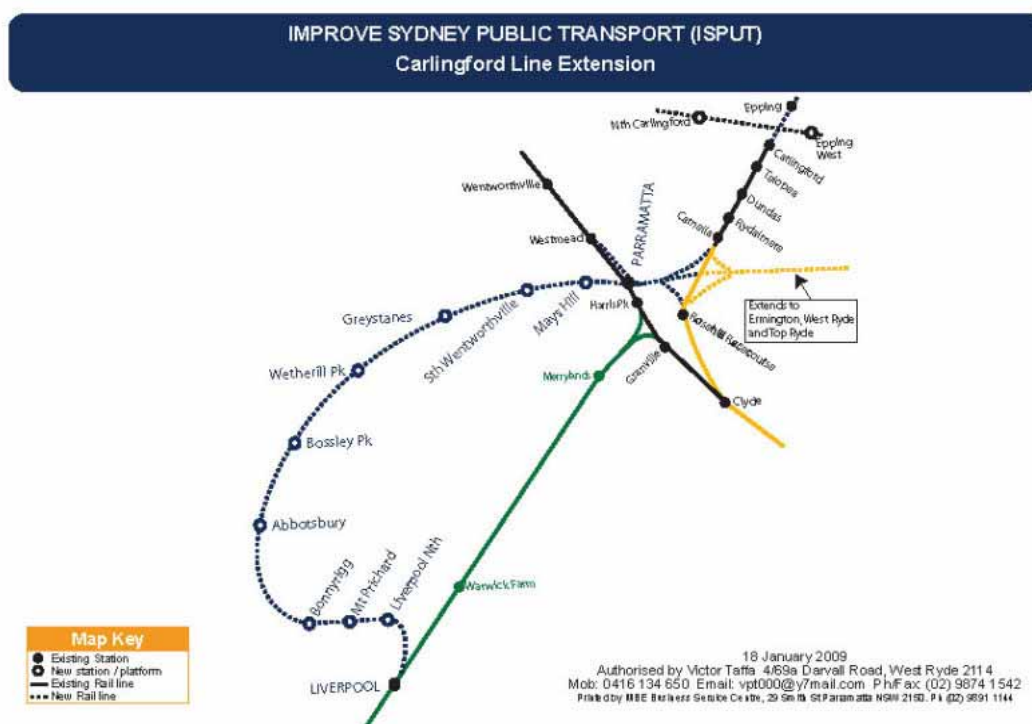
Length

4 Lanes x 3.5 m width	14 metres
1 Median 2.0 m width	2 metres
Length From Reservation	14 metres

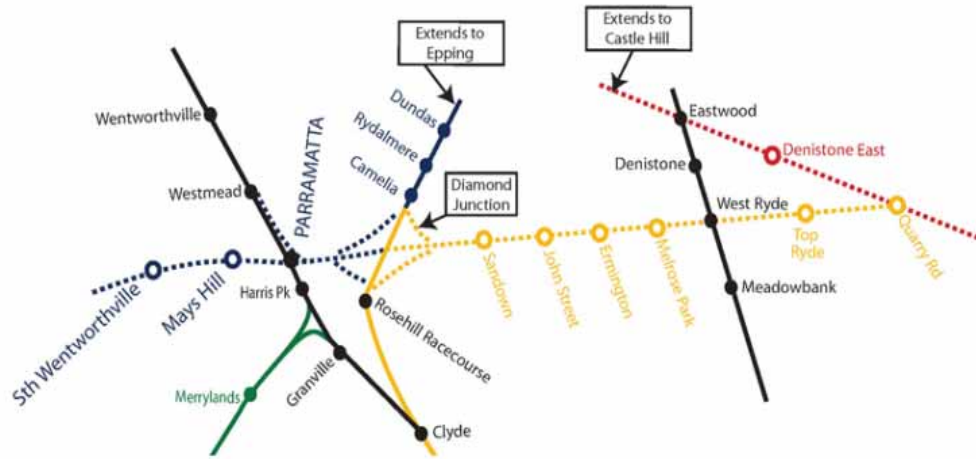
Total Length	30 metres
Rail Weight	50 kg/m

Estimated Total Cost via Carlingford Railway Line is far greater with less Public Benefit and a smaller catchment area that does not serve:

- Macquarie University,
- Macquarie University Railway Station (Heavy Rail),
- Macquarie University Shopping Centre.
- Macquarie Shopping Centre



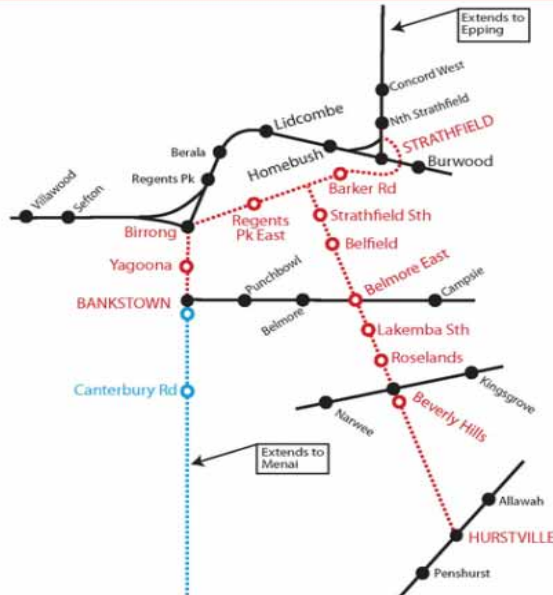
IMPROVE SYDNEY PUBLIC TRANSPORT (ISPUT) Ermington Line



Map Key
 ● Existing Station
 ○ New station / platform
 — Existing Rail line
 --- New Rail line

18 January 2009
 Authorised by Victor Tafta 4/69a Darvall Road, West Ryde 2114
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IMPROVE SYDNEY PUBLIC TRANSPORT (ISPUT) Northern Line Extension



Map Key
 ● Existing Station
 ○ New station / platform
 — Existing Rail line
 --- New Rail line

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Alternative

Wide Verges Or On Street Parking

County Road Reservation, Eastwood in Sydney New South Wales always had the plan to demolish homes in Edgar Street, Welby Street and the pristine and historic Brush Farm Park. Light Rail along County Road Reservation keeps people in their homes.

However Light Rail along Rutledge Street will enable people to turn right safely as opposed to the never ending single lane of traffic.

Light Rail along Woorang Street and Pickford Avenue can do one of two things:

Wide Verges with Light Rail and **NO** on street parking **Or** Narrow Verges with Light Rail and on street parking.

Light Rail from Parramatta-North Ryde via County Road Eastwood serves Macquarie University, Macquarie University Railway Station (Heavy Rail only) and Macquarie Shopping Centre.

Parramatta-North Ryde Light Rail will also traverse the centre of Stewart Street which already has a wide median strip.

Kent Road Primary School will gain new permanent building instead of demountable that is currently on County Road Reservation and Eastwood will gain a new Police Station.

Residents will still have verges to mow however many more residents will have safer roads to drive along as a result of Parramatta-North Ryde Light Rail.