Submission

No 54

INQUIRY INTO THE UTILISATION OF RAIL CORRIDORS

Organisation: Bike North Inc

Name: Ms Carolyn New

Position: Advocacy Officer

Date Received: 2/03/2012

bike north
…making cycling better in northern Sydney

Bike North Inc
PO Box 719
Gladesville NSW 1675

www.bikenorth.org.au
info@bikenorth.org.au

BNA/SUB1202001

Submission to the NSW Parliamentary Enquiry into the Utilisation of Rail Corridors.

2 Mar 2012

The Committee Manager
Committee on Transport and Infrastructure
Parliament House
Macquarie St
Sydney NSW 2000

Submitted by email. No part of this submission is confidential.
Author: Carolyn New, Advocacy Officer, Bike North

About Us

Bike North is a volunteer run bicycle user group, affiliated with Bicycle New South Wales, with a membership of over 600 members. We work with eight councils in northern Sydney, towards creating a bicycling friendly environment for all who want to use a bike for transport or recreation in northern Sydney. As well as actively working with those councils, Roads and Maritime Services / Transport NSW and other government authorities, we run a diverse, popular and quality program of social rides which is free and open to the public. More recently we have developed and offer an education program of cycling skills called '*Bike for Life'* to encourage more skilled and confident bike riders in Sydney.

Since our inception in 1996, Bike North has advocated for the implementation of a 'Rail Trail' by utilisation of the railway easement along the North Shore and Main Northern Railway Lines in the Sydney area to enable a safe, continuous and gently graded route for bike riders through northern Sydney.

Parliamentary Enquiry into the Utilisation of Rail Corridors

Bike North welcomes the NSW Parliamentary Enquiry into the Utilisation of Rail Corridors and especially the review of the use of railway land. We address how rail corridors could facilitate urban renewal and development and improve connectivity of communities on either side of railway lines. Additionally our argument is that this compatible use of the railway corridor has great potential in increasing walking and cycling and assisting these modes to take a greater share of the transport mix, thus contributing towards an overall solution to Sydney's transport issues. We also argue that such usage improves connectivity of communities along railway lines, especially across barriers such as major roads that cross the railway lines.

Why Cycling?
Bike riding is widely recognised as a healthy activity and a sustainable and equitable form of transport. Riding a bike is an easy way for many people to gain the requisite amount of moderate physical activity to reduce the risk of obesity and many common modern diseases. Using a bike to ride to work or for other transport reasons is a very effective way for people to achieve necessary levels of physical activity as part of their everyday activities. In Sydney, increased use of the bike for shorter commutes has great potential to reduce congestion and ease the increasing demands that single occupancy cars place on the roads and the increased pressure on our trains and buses. Bikes are also sustainable transport which is clean, not dependent on dwindling non-renewal resources and contributes to reducing the impacts of climate change. Bikes are a cheap and economical form of transport and cycling is a highly social activity.

Cycling is a most efficient mode of transport for short transport journeys of up to 10 kilometres.

Cycling Policy
The encouragement of cycling for transport and recreation is policy at all levels of Australian government for many of the reasons already outlined previously.

The National Cycling Strategy, 2011-2016 is the latest of a number of five year strategies released by various federal governments. This Strategy's goal of '*Gearing up for active and sustainable communities'* is underpinned by six priorities and objectives including to '***create a comprehensive network of safe and attractive routes to cycle and end-of trip facilities'***.

NSW 2021, a plan to make NSW Number One' identifies the target to '***more than double the mode share of bicycle trips in the Greater Sydney Region, at a local and district level by 2016'.*** To meet this target the plan identifies the priority action to '***increase walking and cycling to help ease transport congestion and build a healthier, more active community'.*** This priority action includes completing the construction of the *Metro Sydney Bicycle Network.*

This NSW2021 Plan target and priority action supports the NSW BikePlan released in 2010. This plan identified the Metro Sydney Bicycle Network, in particular the priority links for implementation. These include the priority link F *Chatswood to Artarmon*. Further detail of the routes in the Metro Sydney Bicycle Network was outlined in the previous Bike Plan 2010 including such routes as *Chatswood to Turramurra Rail Trail, Hornsby-South Turramurra* and *Rail Trail, Eastwood to Concord West.*

Many local governments, especially in northern Sydney, have policies to increase the use of the bikes for both transport and as recreation due to the benefits outlined previously. All eight local governments in the Bike North area have bike plans and at

least two councils, Willoughby and Ku-ring-gai are currently in the process of reviewing those plans. Many local governments annually extend and improve their network of cycleways in accordance with their adopted bike plans.

Demand for Cycling

There is a strong latent demand for cycling in Sydney communities that if fulfilled would enable these cycling policies to be easily met. There is evidence of this demand from the City of Sydney recent experiences and also north of the harbour with the cycling infrastructure built as part of the Lane Cove Tunnel project.

The City of Sydney did extensive social research before developing their most recent cycling strategy and embarking on the implementation of their network of separated cycleways. Their research showed that the greatest barrier for potential cyclists was safety concerns, high levels of traffic and lack of cycling infrastructure and that dedicated bike lanes and off road-routes would encourage more people to cycle. The City of Sydney has already reported large percentage increases in bike usage on their as yet quite incomplete bike network.

The Lane Cove Tunnel project included a cycling infrastructure component with completion of a 7km cycleway for the full extent of the project between Naremburn and North Ryde utilising spare road space alongside Epping Road and the Gore Hill Freeway. This continuous and relatively safe cycleway has seen large increases in usage since the first stages were completed in 2006. While Bike North has not seen recent official figures reported from this cycleway itself, this is clear not just from anecdotal evidence. The RMS has indicated that there have been unprecedented increases in bicycle use on the Sydney Harbour Bridge cycleway with daily weekday bike counts increasing from around 1000 in the year 2007 to well over 2000 in the year 2011. We understand from the RMS that while many bike counters in the Sydney urban area have also detected significant increases over that time frame, the Sydney Harbour Bridge cycleway is recognised as the busiest in Sydney and has experienced the greatest increase. The 7km Lane Cove cycleway is a feeder to the Sydney Harbour Bridge cycleway and has clearly had an impact on the bridge increase. This increase is despite the fact that the cycleway ends inappropriately at the tunnel project boundaries, in the middle of a freeway, and presents a most unfriendly environment for cycling between Naremburn and the Sydney Harbour Bridge cycleway itself.

Closing the gap between these two cycleways is a high priority of the RMS who are expected to very soon release on public exhibition, Concept Designs for stage 1 between Naremburn and Ridge St, North Sydney. **The implication is that the RMS appreciates that delivery of that 7km continuous cycleway has a major impact on demand that warrants high expenditure of good quality separated cycleway utilising the Warringah Freeway corridor.**

Future Needs for Regional Cycleways in Sydney North

While currently the greatest priority in providing safe, continuous cycle routes in northern Sydney is completion of the gap between the end of the existing cycleway in Naremburn and the Sydney Harbour Bridge, there are other cycling regional connections that are also urgently needed at a slightly lower priority. Many of these are represented on the Metro Sydney Bicycle Network. Many of these routes include the following in northern Sydney which could be satisfied by cycleways in the proximity of railway lines:

- Connecting existing Lane Cove Tunnel Cycleway to major centre of Chatswood
- Chatswood to Hornsby route would make connections along the North Shore rail line such as
    - the major centre Chatswood to suburbs of Ku-ring-gai LGA
    - the major centre Hornsby to Waitara and suburbs of Kur-ring-gai LGA
    - connecting to centres such as at Gordon, Pymble and Turramurra
- Hornsby to Rhodes route would make connections along the Main Northern line such as
    - Connecting to centres such as Pennant Hills, Epping and Eastwood
    - Connecting to suburbs in Hornsby LGA

Prior Use in Sydney

1. A section of the Eastwood to Meadowbank cycling route utilises an area of railway easement adjacent to Darvall Park, Eastwood.
2. The Parramatta to Liverpool Rail Trail was delivered from BikePlan 2010 in the year 2000. This Rail Trail primarily used the road easement of the road which was adjacent to the railway but incursions were made into the rail easement where needed and available.

Why Railway Easements Help Meet these Needs

The topography of these urban suburbs in the North Shore and Northern Sydney makes cycling challenging. The area is very hilly with the best grades for cycling along the ridge lines. The main roads and railways are already located along these ridge lines. Where available, land in the railway easement could provide an easier grade for sections of a future cycleway.

As these are long established areas, there is great pressure on land space and it is difficult to provide for a continuously separated space for bikes and for walkers. Where available, the railway easement can contribute to that space allocation.

These cycling routes are crossed by many roads, in particular several major roads which create significant barriers. Key examples along the North Shore Line are Mona Vale Road and Boundary Road. By providing bridges adjacent to railway bridges and

a small area of easement on each side of these bridges, these barriers can be easily surmounted.

Most major and smaller centres in these areas are located close to the railway line. These are popular destinations for people riding bikes for shorter journeys.

While use of the railway easement for long continuous regional cycleways would be ideal, we understand that existing and future needs for railway lsnf does make that impossible. But there is often discontinuous space available alongside or even above railways which can substantially enhance cycling routes using roads adjacent to railways. Cycleways do need to be continuous, but this can be achieved by a suitable mix of railway, road and other public land.

Example North Shore Rail Trail

By way of example we reference a submission previously made by Bike North member Tony Arnold for a North Shore Rail Trail utilising sections of the corridor. This submission is available at www.advocacy.bikenorth.org.au/NorthShoreRailTrail. The overview document is attached and details of how each section were proposed can be viewed on our website.

Recommendations

Bike North recommends that

1. The use of railway easements for walking and cycling facilities should be actively encouraged wherever there is sufficient room to enable safe use without impinging on railway use.
2. Rail, road and cycling planners within Transport NSW, other relevant government authorities, local and federal government should activity work together to enable the eventual delivery of Sydney Metro Bicycle Network utilising rail and road corridors wherever available.
3. There be no sale or other disposal of spare railway land and airspace without due consideration of the potential usage available for walking and cycling.
4. Consideration as to whether and how walking and cycling facilities could be provided should be always made as part of any railway upgrade such as track duplication or bridge updates.

bike north
…making cycling better in northern Sydney

Bike North Inc
PO Box 719
Gladesville NSW 1675

www.bikenorth.org.au
info@bikenorth.org.au

NORTH SHORE RAIL TRAIL

FROM
ARTARMON TO HORNSBY

Prepared by: Tony Arnold
On behalf of: Bike North
Date: 01/08/10

TABLE OF CONTENTS

1 - DEFINITIONS

1.1 Abbreviations

SUP Shared Use Path

1.2 Extent of Works

The cost of each segment of the project has been estimated using the following rules:

Minor	• Line markings • Fencing • Barriers • Traffic Islands
Normal	Minor Works AND: • Path surfacing • Curb and guttering • Minor earth works • Minor vegetation clearing
Major	Normal Works AND: • Significant earth works • Significant vegetation clearing • Elevated structures • Land purchase

2 - INFRASTRUCTURE SPECIFICATIONS

2.1 Overview

The standard expected of cycling infrastructure in 2010 is far higher than a decade ago. This is seen in recent standards/guidelines such as NSW RTA Bicycle Guidelines (2003) and Austroad 14 (Bicycles). It is also reflected in facilities such as:

- Epping Road Cycleway.
- M7 Cycleway.
- Olympic Park to Parramatta Cycleway.
- Bourke St and other City of Sydney initiatives.

Local Councils have also improved the quality and amenity of bicycle infrastructure over the last ten years. For example, shared paths are now 2.5m – 4m wide (rather than 2m) and on-road bicycle lanes are increasingly being separated from parking lanes.

Improved standards recognise the increased role cycling has in addressing issues such as public health, climate change, economic equality and congestion. While previous facilities catered for occasional recreation / child cyclists, newer facilities must cater for the continuing increase in cyclist commuters and practical utility cycling.

2.2 Lighting

To ensure that the route is safe, it is important that it is well lit, especially along the rail reserve and other off-road locations. The SUP along the Gore Hill Fwy provides a good example of path lighting.

2.3 Security

Passive security such as lighting and route design forms an important component of security. However, active security such as CCTV cameras and an active police presence are also necessary to create a safe environment for cyclists and pedestrians.

2.4 Curb-adjacent Cycle Lanes

When the route passes along a roadway, curb-adjacent cycle lanes with separated footpaths are safer than Shared Use Paths (SUPs). Curb-adjacent cycle lanes are separated from pedestrian traffic and they have greater clearance from cars entering driveways. Cars entering curb-adjacent cycle lanes are clearly entering the road space and will also be likely to take care.

The following photos show that there are a number of factors that can be used to create safer spaces. The curb separation can be as simple as a paved area which delineates space but also allows cyclists to cross onto the road space. This sort of treatment may not always be suitable, especially where cyclists need to be protected from cars that cut into a bike lane at the apex of a corner.

Figure 1: Recommended Style -
Curb-adjacent unidirectional cycle lane with separate foot path.

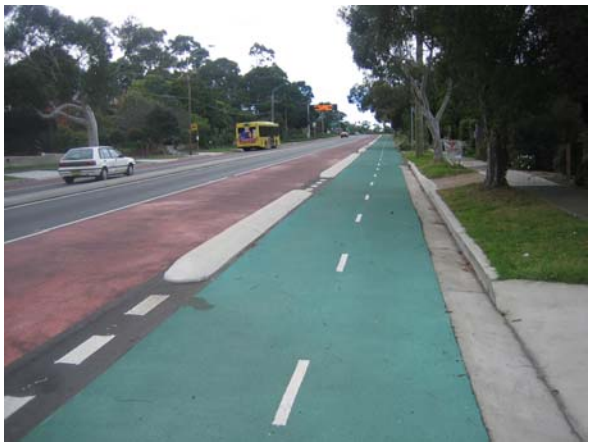

Figure 2: Alternative Style –
Curb-adjacent bidirectional cycle lane with separate foot path.

2.5 Shared Use Paths

If curb-adjacent lanes are not practical for a particular road, then wide (approx. 4m) SUPs are an alternative option. The same specifications can be used for paths that are on a rail reserve or otherwise separated from roadways. Bike North recommends that shared paths utilise the 2-lane SUP configuration rather than the 3-lane configuration as path users comply better when only 2 lanes are present.

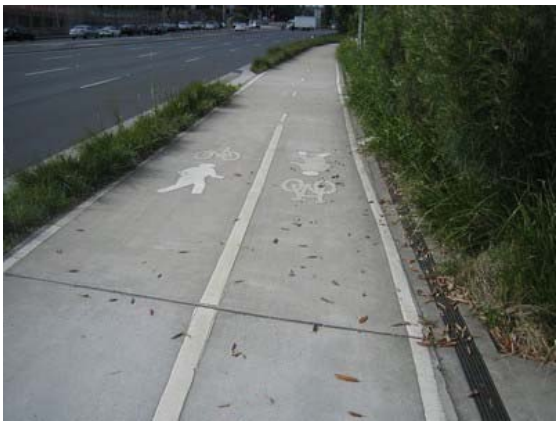

Figure 3: Recommended Style -
SUP with combined pedestrian/cycle lanes.

Figure 4: Alternative Style –
SUP with separate pedestrian lane.

2.6 Barriers

The following photos are of suitable barriers to be used to restrict access to the pedestrian/cycle route. Bollards are suitable to restrict access to motorised traffic but to allow cyclists to remain at speed. Speed barriers are suitable to restrict access to motorised traffic and to ensure that cyclists slow to walking speed. Speed barriers are appropriate in locations where cycle traffic is approaching an error with heavy pedestrian traffic. Speed barriers are not appropriate for off-ramps that rise up towards overpasses, as cyclists leaving the path will already be travelling at a slow speed.

Figure 5 – Bollards.

Figure 6 – Speed barriers.

2.7 Crossings

When the proposed route crosses low-traffic roads, raised crossings should be provided with leaning rails for cyclists on each side. The raised road indicates to motorists that they need to slow down. The leaning rails allow cyclists to remain clipped into their pedals while waiting to cross.

For medium-traffic roads where it is not simple to cross the whole street in one movement, median islands should be provided with leaning rails. The traffic island reduces the crossing distance and the complexity required to assess traffic coming from two or more directions.

Figure 7: Low-traffic Crossings.

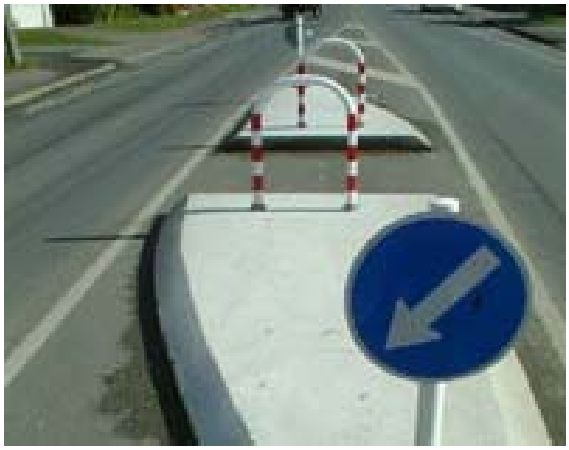

Figure 8: Medium-traffic Crossings

2.8 Signalised Intersections

At locations where the proposed route crosses or an access point joins a major road at a signalised intersection, bicycle lanterns should be used to legitimise the place of cyclists alongside pedestrians.

At locations where the proposed route provides an access point at a signalised crossing, advance-stop bike boxes should be used to allow cyclists to join the flow of traffic when the lights turn red. Advance stop boxes legitimise the position of cyclists who join with queuing traffic.

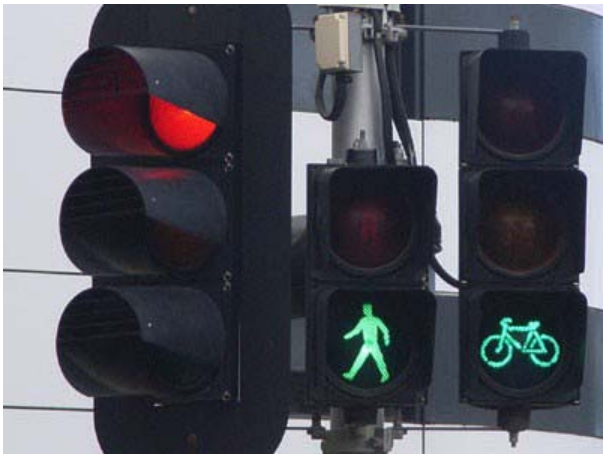

Figure 9: Bicycle lanterns.

Figure 10: Advance-stop bike box.

3 - THE CASE FOR CYCLING

3.1 Climate Change, Sustainability and The Environment

Although Governments around the world recognise that climate change is likely to have catastrophic consequences for the environment, there is a distinct lack of real action being undertaken to reduce our carbon emissions. In most cases, Governments blame their inactivity on the concern that action would ruin the economy or increase employment. However, encouraging cycling is great for the environment while also having positive results for the economy, for individuals and for society as a whole.

3.2 Health & Health Spending

Australia suffers from one of the highest obesity rates on earth, resulting in a high rate of obesity-related illnesses such as diabetes, heart disease and other illnesses. The high obesity rate is due to a combination of poor eating habits and a sedentary lifestyle. While cycling will not improve your diet, cycling as a primary mode of transport will usually provide the recommended daily exercise. In countries such as Denmark and The Netherlands over 30% of all trips are made on a bicycle, showing that it is possible for cycling to be a serious transport choice for everyone from children to grandparents.

3.3 Reduced Congestion

By replacing car journeys with bike journeys, congestion on major arteries like the Pacific Hwy would be greatly reduced. Given that the average trip distances for drivers (9.3km), passengers (7.3km) and bus passengers (6.5km)[1] are all comfortable for the average cyclist, the potential to reduce congestion is significant.

3.4 Economics

Individuals who use bicycles for transport enjoy a low-cost lifestyle. No tolls, no petrol, no registration and cheap servicing results in savings of over $10,000 p.a. Societies who encourage bicycle use enjoy economic benefits from less congestion, lower healthcare costs, lower infrastructure costs and better productivity.

3.5 Enhanced Lifestyle

Cyclists are able to enjoy an enhanced lifestyle through better health, fitness and well-being. Cyclists also gain a sense of independence and self-reliance from the fact that they are insulated from the effects of traffic jams, bus strikes and train delays. Cyclists also save significant amounts of money.

3.6 Improved Community

The atmosphere in a community is strongly affected by the interaction of people within that community. Cyclists and pedestrians interact with each other on a more personal level than motorists who are separated from each other by their car and windshield. The increased incidence of road rage is evidence of the effect that separating people has on our ability to relate to each other as human beings. Instead, cars become an extension of the person without the softening traits of an actual human.

3.7 Equality of Access to Transport

Many people do not have access to a car due to affordability, age, loss of licence or a number of other reasons. A significant number of children and students are unable to drive and rely on transport from parents. The traffic generated by these trips significantly adds to congestion and the risk of accidents near schools. Providing adequate pedestrian and cycling facilities is essential for equal access to transport.

[1] Household Travel Survey 2007, Transport Data Centre.

4 - THE CASE FOR A NORTH SHORE RAIL TRAIL

4.1 Overview

The Hornsby, Ku-ring-gai and Willoughby areas present a number of challenges to cyclists. The terrain is hilly and the roads are often narrow with no space for cyclists to escape the dangers of automobiles. The best option in terms of directness and terrain is the ridge line that is used by the Pacific Hwy and North Shore Rail Line. Unfortunately cyclists have no access to the rail corridor and (rightly) avoid the busy Pacific Hwy for their own safety.

The logical next choice is to use streets parallel to the Pacific Hwy such as Werona Ave, Lindfield Ave and Hill St. However, these streets are also very busy and have the added disadvantage of being narrow, single-lane roads with numerous hills. The only safe option for cyclists is to choose an indirect and mountainous route through the back streets. In order to make cycling a viable option for North Shore residents, the proposed route must flatten the topography and provide safe separation from traffic.

The proposed route uses the rail reserve along the North Shore Train Line which is direct and flat. It also links to other major cycle routes and extends the reach of the proposed route to other major business centres such as North Ryde, North Sydney and Sydney City.

4.2 Improved Access to Businesses

The major destinations on the North Shore Rail Trail are the business districts of St Leonards, Chatswood, Gordon and Hornsby. The proposed route also provides a safe and efficient option for people attending the many offices and shopping precincts along the North Shore rail corridor.

4.3 Improved Access to Schools, Colleges and Universities

The North Shore is well-known for its many excellent schools. These schools are major trip generators and consist of students who are mostly too young to drive. Cycling is an excellent alternative to being driven to and from school. Cycling provides children with independence and improves the safety around school grounds by reducing traffic.

4.4 Improved Access to Train Stations

A cyclist is 3 to 5 times faster than a pedestrian which greatly increases the distance a person can travel to their nearest station. This increases the catchment area by a factor of between 10 and 25 times. Many people who would not considering walking to the station would be able to cycle given safe facilities.

Currently, the area reserved for free car parking around train stations is enormous. Firstly, there are the car parks with as many as 1000 spots at a single station (mostly free). Secondly, there are the streets for hundreds of metres around that are used for all day commuter parking (mostly free). Even with this huge amount of land being reserved for cars, the car parks are full and the streets are packed with cars.

In contrast, bike racks and bike boxes that are right at the station entrance are often not utilised 100%. This is hardly surprising given the bicycle-hostile environment surrounding the train stations and the fact that bike boxes require a hire fee (while thousands of free car parking spots are provided).

With the addition of the proposed route, cyclists will be able to reach the route (mostly through quiet streets) and ride safely to their local station. Some cyclists will even choose to ride past a few more stations to improve fitness, reach an express station or perhaps ride all the way to work. Eventually, many people who never dreamed of riding all the way to work will find themselves enjoying their new-found independence from traffic and public transport.

4.5 Safety

The most significant advantage to providing a separate route for cyclists is an improvement in cyclist safety. Currently, the two major options for cyclists wishing to travel along the Pacific Hwy corridor are to use the Pacific Hwy itself (a 6 lane highway) or streets such as Werona Ave, Lindfield Ave, Hill St etc which are narrow/steep in places and carry high volumes of traffic. These two options are not safe, even for experienced cyclists.

With the addition of a separated facility, cyclists will have far greater safety, with many intersections being avoided altogether by using the existing rail underpasses. The safety of pedestrians will also be improved if the path is shared-use. In particular, the safety of elderly and disabled residents will improve.

In countries such as Denmark and The Netherlands where over 30% of all trips are made by bicycle, road safety is excellent. The calming effect that cyclists have on motorised traffic results in a reduction in cycling deaths, pedestrian deaths and serious motor vehicle accidents.

4.6 Time & Effort

The time and effort advantages of the project can be shown by comparing some simple statistics:

Factor	Direct Route Pacific Hwy	Direct Route Back Streets	Existing Bicycle Route	North Shore Rail Trail
Total Distance	19 km	19.5 km	24 km	18 km
Total Climb (Southbound)	200 m	220 m	360 m	80 m
Total Climb (Northbound)	320 m	340 m	480 m	200 m
Signalised Intersections				
Other Intersections				

The current bicycle route requires the rider to climb around 200% to 400% more vertical ascent (depending on direction) and to travel some 6km (33%) further than the proposed route. Climbing hills slows cyclists significantly and makes journeys much more draining. The increased climbing combined with the increased route length doubles journey times for cycling trips. This results in cycling becoming an unattractive option for commuting and other utility trips.

In contrast, there are a number of cycle routes that run perpendicularly to the Pacific Hwy corridor. These are not all flat, but they generally follow the best gradients available given the terrain. For example:

- Epping Rd/Gore Hill Cycleway
- Mowbray Rd
- Fullers Rd – Help St
- Ashley St
- Clanville Rd
- Tryon Rd
- Fiddens Wharf Rd - Stanhope Rd
- Telegraph Rd
- Bobbin Head Rd
- Kissing Point Rd – Eastern Rd
- Ada Ave – Coonanbarra Rd

The result is that cyclists are able to travel North-East or South-West, but cannot travel North-West or South-East (in line with the Pacific Hwy corridor). Unfortunately, this makes travel to and from Sydney City as well as to the town centres along the train line very difficult.

If cycling is to become a reasonable alternative to using motor vehicles, it is imperative that cycling is given the same opportunities to succeed.

5 - PROJECT DESCRIPTION

5.1 Overview

The North Shore Rail Trail is a continuous, safe, quick and easily rideable route from Artarmon to Hornsby. The total length of the proposed route is 18 km with an estimated ride time of 54 minutes (assuming a 20km/h average speed). The route will be designed to allow cyclists to reach a maximum speed of 50 km/h and will avoid intersections wherever possible. The path should accommodate 2 cyclists riding side-by-side in each direction. The gradient along the route will be less than 3%.

5.2 Route Corridor

The route primarily utilises vacant rail reserves along the North Shore Rail Line and uses various local roads and nature strips to connect broken sections. By utilising the existing road overpasses, the rail reserve offers a mostly uninterrupted and level route. Several new bridges will also be required to run parallel to existing rail bridges.

While funding will always be essential to the success of any infrastructure plan, the major hurdle is securing the right to use the rail reserves. Any route that does not make use of the rail reserves will be dangerous and tiring. Busy pedestrian areas and traffic at the train stations and busy, narrow and steep roads between the stations creates a dangerous environment for cyclists.

5.3 Route Stages

This document breaks the proposed route into 13 stages (preferably to be completed in order from A to M). Of course, the entire route can be built at one time, however, breaking it down in this way allows for the project to be completed stage-by-stage as funding becomes available. Each stage provides an improvement in cycling amenity by extending the reach of the existing Epping Rd/Gore Hill cycleway.

With the recent completion of the Chatswood-Epping Rail Line, it is anticipated this line may be extended to St Leonards and beyond. It is important that Stage A, B and C of the proposed route is included in the design of this rail extension as failure to do so may result in the rail reserve being rendered unusable. The rail reserve between Chatswood and Hornsby is unlikely to be utilised for further rail expansion and can therefore be used liberally for the proposed route.

Stage	Suburb	Dist	Start	Finish	Extent	Benefit
A	St Leonards	1400m	Oxley St	Francis St	Normal	Large
B	Artarmon	1800m	Francis St	Mowbray Rd	Major	Medium
C	Chatswood	1820m	Mowbray Rd	Ashley St	Minor	Medium
D	Roseville	1720m	Ashley St	Chelmsford Ave	Major	Large
E	Lindfield	1110m	Chelmsford Ave	Treatts Rd	Normal	Large
F	Killara	1100m	Treatts Rd	Greengate Rd	Normal	Large
G	Gordon	1430m	Greengate Rd	Mount William St	Normal	Large
H	Pymble	1900m	Mount William St	Beechworth Rd	Major	Large
I	Turramurra	1600m	Beechworth Rd	Cherry St	Major	Large
J	Warrawee	1245m	Cherry St	Cleveland St	Normal	Large
K	Wahroonga	920m	Cleveland St	Bundarra Ave	Normal	Large
L	Waitara	1165m	Bundarra Ave	Thomas St	Normal	Medium
M	Hornsby	770m	Thomas St	Hornsby Station	Normal	Large