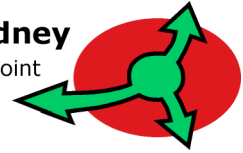


EcoTransit Sydney

PO Box 630 Milsons Point
NSW 1565
ecotransit.org.au



A Submission on the Sydney Light Rail – Inner West Extension Study Draft Report

Prepared by: EcoTransit Sydney

Date: 5 June 2010

Authorised by the Executive Committee of EcoTransit Sydney

The submission (including covering letters) consists of:
15 pages

Contact person for this submission:

John Bignucolo

02 9713 6993

john.bignucolo@gmail.com

Contact details for EcoTransit Sydney, Inc.:

PO Box 630

Milsons Point

NSW 1565

See our website at: www.ecotransit.org.au

EcoTransit Sydney

PO Box 630 Milsons Point
NSW 1565
ecotransit.org.au



5 June 2010

To whom it may concern,

Please accept this submission from EcoTransit Sydney regarding the *Sydney Light Rail – Inner West Extension Sydney Draft Report* prepared by GHD for the NSW Department of Transport and Infrastructure. This submission was prepared and submitted on behalf of the sustainable transport advocacy group, EcoTransit Sydney, in response to the request for feedback.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J. Bignucolo', written in a cursive style.

John Bignucolo
Secretary
EcoTransit Sydney

Summary

The Rozelle freight rail line has existed as a transport corridor for a century and its planning controls and zoning reflect that purpose. Changing demographics and land use have meant that it also represents an opportunity for a significant addition to public transport capacity and local amenity in the Inner West for very little cost, and all that flows from that in terms of personal mobility, access to sustainable transport for all members of the community, alleviating road congestion and addressing climate change.

The opportunity of fully employing an existing, grade-separated double track rail line that passes through a built-up area where existing public transport has reached or exceeded capacity is too good to miss. Instead of freight, light rail will move people – quietly, quickly, conveniently and frequently.

EcoTransit Sydney is strongly supportive of the NSW Government's policy outcome, as set out in the Metropolitan Transport Plan¹ to extend the light rail service beyond Lilyfield to Dulwich Hill using the Rozelle rail freight line and boost public transport capacity in the Inner West.

The determination to maintain a dual track configuration along the entire route is absolutely the correct decision. It will maximise reliability, service flexibility and frequency while reducing the costs of the extension by avoiding the more complex signalling systems needed for a single track operation.

The criteria used in the selection of stop locations has resulted in a sound proposal for a set of light rail stops. EcoTransit Sydney welcomes the recognition of the importance locating stops as close as possible to significant interchange locations with heavy rail and bus services.

EcoTransit Sydney recommends that the NSW Government take advantage of the opportunity presented by the light rail extension to reconsider its determination to exclude the light rail service from the MyZone ticketing scheme.

We do not agree with the conclusions of the GHD study in so far as they relate to the provision of a shared path for pedestrians and cyclists parallel to the light rail extension and we note that this aspect has been treated in a cursory fashion.

In the context of the report's analysis of the GreenWay project's compatibility with a dual track light rail service, EcoTransit Sydney recommends that further investigation be undertaken of the feasibility of the *Blue* route. EcoTransit believes that the route for an in-corridor, off formation, shared path should be along the west side of the double-track light rail line with the probable exception of that section of the route lying between Weston Street and Edward Lane, Summer Hill where the path would be located along Weston Street.

The submission concludes with a brief summary of the *City West Cycle-Link*, a proposal from EcoTransit Sydney that would provide a grade-separated cycling and pedestrian facility connecting Lilyfield to the Anzac Bridge, without requiring the use of the rail formation. The proposal would provide a shared path subway under the City West Link Road, bypassing James, Norton and Henry Streets and Derbyshire Road. It would subsequently connect to the Anzac Bridge cycleway at White Bay. EcoTransit Sydney suggests that it should be investigated as a supplementary project.

By virtue of its close proximity to the entrance of the City West Cycle-Link subway, we note the opportunity at the Norton 2 (James St) light rail stop to construct an integrated, closely coupled interchange providing access to light rail, walking and cycling facilities.

¹ Metropolitan Transport Plan – <http://www.nsw.gov.au/metropolitantransportplan>

Double Track Configuration

The Rozelle freight rail line has existed as a dual track transport corridor for a century and its planning controls and zoning reflect that purpose. Changing demographics and land use have meant that it also represents an opportunity for a significant addition to public transport capacity and local amenity in the Inner West at very little cost, and all that flows from that in terms of personal mobility, access to sustainable transport for all members of the community, alleviating road congestion and addressing climate change.

EcoTransit Sydney is in strong agreement with the rationales outlined in §4.7 “Assumptions Relating to Two Way Light Rail Operation” of the report for the maintenance of a double track configuration along the entire length of the light rail route from Lilyfield to Dulwich Hill.

There is a welcome recognition in the Metropolitan Transport Plan and the GHD report of:

- How valuable a piece of urban rail transport infrastructure the Rozelle freight line actually is;
- Its importance in public transport and land use planning terms for the broader Inner West;
- An acknowledgement of the corridor's ability to service a broad cross-section of the community including public transport users, cyclists and pedestrians;
- A recognition of the potential network benefits that an extended light rail service would offer in terms of substantial trip substitutions and in connecting to other public transport modes, particularly bus routes and the heavy rail network at Dulwich Hill and Lewisham.

Alternate proposals for the rail corridor

In addition to a dual track extension of the light rail to Dulwich Hill, other proposals have been put forward recently that favour other uses of the rail corridor. Chief among them have been proposals to convert the rail corridor into a cycling route where the cycleway is located on one or both tracks of the formation. EcoTransit Sydney believes this would yield a comparatively poor outcome for the broader community.

There are several underlying assumptions to the alternate proposals for providing – at best – a single track for light rail west of Lilyfield:

- That demand for public transport in the Inner West has not saturated available capacity nor is congestion on our roads a constraint on an extension of bus operations;
- That adding a high capacity², flexible grade-separated public transport mode, offering a north-south cross-connection to the heavy rail system and bus routes offers little in the way of broad community benefit;
- That a single track is sufficient for light rail, which is invariably derided as a comparatively low capacity and low frequency service and that questions of dual versus single track configuration are not relevant to the *viability* of the light service from the point of view of an operator;
- That providing a constrained *boutique* service is sufficient for the Inner West, even though it

² http://en.wikipedia.org/wiki/Light_rail#Capacity_of_light_rail_versus_roads

would offer little or no utility or community benefit as a transport mode, and is a worthwhile use of a valuable, publicly-owned transport corridor.

- That no provision can be made for a cycleway located almost wholly within the rail corridor.

Consequently, according to this view, one or both of the existing rail tracks should become a cycleway.

EcoTransit Sydney is not persuaded of the validity of this view, as it runs counter to the experience of the existing light rail service, whose patronage has continued to grow despite higher fares and its unjustified exclusion from MyZone and transport fare concession schemes.

We would note that the existing light rail service to Lilyfield uses a double track configuration. Introducing an arbitrary dual track/single track operational disjunction at Lilyfield would be contrary to the practical operation of the light rail service and the interests of the commuting public. This would also run counter to the operational benefits in having two tracks available along the entire route, particularly in terms of turn-around and service frequency, while maximising flexibility and fault tolerance.

For example, the benefits to the Maryland Transit Administration when it upgraded from single to double track were described in the following terms³:

At the time that the Maryland Transit Administration (MTA) constructed the Central Light Rail Line serving the Baltimore metropolitan area, funds were not available to make the entire 29-mile system double-tracked. Twelve miles of the system were single track only, which over the years has resulted in operations, capacity and maintenance problems. JMT, in joint venture, designed the double tracking for two of the eight single track segments, between the Linthicum and Cromwell stations. The addition of a second track gives MTA much greater flexibility in scheduling and greatly reduce safety concerns throughout the Central Light Rail Line system.

The opportunity of fully employing an existing, grade-separated double track rail line that passes through a built-up area where existing public transport has reached or exceeded capacity is too good to miss. Instead of freight, light rail will move people – quietly, quickly, conveniently and frequently.

Stop Locations

EcoTransit Sydney is in agreement with the strategic criteria used to determine stop locations as set out in §3.2.1 “Strategic Level Considerations:”

In determining the optimum location for the stops on the Inner West Extension of the Sydney light rail system, it is necessary to consider a number of influencing factors at a strategic level. In order of importance, these are:

1. Integration with land use;
2. Integration with transport networks;
3. Construction costs (including constructability); and
4. Operational considerations.

³ JMT Corp – <http://www.jmt.com/popups/doubletrack.html>

The resulting set of stop locations is one with which EcoTransit Sydney is largely in agreement. This is particularly the case with the following stops:

- Lewisham Interchange (North), providing an interchange with the heavy rail network at Lewisham Station
- Dulwich Hill Shops, which provides an interchange to the bus services travelling along New Canterbury Road
- Dulwich Hill Interchange 1 (Bedford Crescent), which provides an interchange with the heavy rail network at Dulwich Hill station.

EcoTransit Sydney would urge that the NSW government continue to place a very high priority on ensuring that light rail stops are situated so as to permit the tightest possible integration of light rail with bus and heavy rail services, and the smooth, quick transfer of passengers between modes. This would be in keeping with accepted best practice in public transport network design.

The provision of these modal interchanges will be a crucial factor in ensuring high patronage levels on the light rail service, and for maximising the convenience, connectivity and utility of the service for the commuting public.

We strongly urge that NSWTI commit to undertaking detailed design and engineering studies with the aim of enabling passengers to seamlessly transfer from one transport mode to another at these locations. The obvious corollary is that light rail stops would be located so as to minimise distance, and therefore transfer times between different modes.

We acknowledge that these facilities may require innovative design and engineering approaches to achieve the above outcomes. ***This is particularly the case with the Lewisham interchange.*** However, the long term benefit to the community provides a strong impetus for their consideration by NSWTI, and expedited funding for, and construction of a scheme aimed at facilitating rapid mode-to-mode interchange.

EcoTransit Sydney believes that the arguments presented in favour of the Constitution Road stop justify its inclusion in the short list of stop locations. In addition to the factors set out on p. 22 of the GHD report, we note:

- The extensive medium density residential developments in its vicinity;
- The existence of a regionally important sporting venue and recreational facilities in the immediate vicinity;
- That extending the patronage catchment with this stop would have little effect on the time taken between the Bankstown line and Western Lines;
- That a Constitution Road stop would provide the fastest, shortest access to the Dulwich Hill shopping strip.

With regard to the proposed Old Canterbury Road stop, uncertainty over land use developments between Longport St and Old Canterbury Road means that deferring the stop until the nature, extent and detailed design of redevelopment in this precinct has been determined, is a reasonable outcome.

Norton 2 (James Street) Stop and the City-West Cycle-Link

In addition to integrating with bus services, as outlined in §3.3 “Assessment of Stop Locations,” the Norton 2 (James St) stop also has the potential to integrate with enhanced pedestrian and cycling facilities, by virtue of its location immediately adjacent to the entrance of the City West Cycle-Link subway and tunnel proposed by EcoTransit Sydney.

The location affords the government an opportunity to create an integrated, well designed and closely coupled interchange providing access to light rail, walking and cycling facilities, and improved connections with local streets. The resulting additional access for pedestrians and cyclists would also increase the flow of people in the vicinity of the stop, enhancing the sense of safety of light rail commuters.

We note the benefit of the Cycle-Link subway to pedestrians who would no longer need to cross the slip lane running from the City West Link Road onto Darley Road. We would encourage the government to coordinate construction of the subway with the works associated with constructing the Norton 2 (James St) light rail stop.

Fares and Ticketing

The discussion in §4.6 “Fares and Ticketing” and Chapter 5 “Assessment of Patronage” invariably leads to a consideration of the effects on patronage of the exclusion of the light rail service from the NSW Government's MyZone ticketing scheme. In light of the recently announced Metropolitan Transport Plan and its commitment to a significant extension to light rail services in the Inner West and CBD, EcoTransit Sydney would urge the government to review its determination⁴ that the light rail service be excluded from the MyZone integrated fare structure scheme.

We note that the current and proposed light rail network falls completely within the *MyMulti* region – the region with the highest public transport modal split in Sydney. Public transport users, particularly those commuting in the Inner West and Inner City, would benefit from having light rail seamlessly integrated with the other elements of the broader public transport network via MyZone.

From the point of view of a passenger travelling on the public transport system, the exclusion of the light rail service from MyZone (whether from multi-zone tickets or absent a *MyTram* single-mode option) makes little sense and serves as an effective disincentive to using the service. It also runs counter to the stated – and sound – modal integration and fare structuring principles underpinning the MyZone scheme⁵:

The new fare structure offers:

- *standard fares regardless of where you live and where you are travelling*
- *the benefits of broad fare bands without the disadvantages of a physical geographic boundary*
- *greater integration through the introduction of multi-mode tickets across CityRail, Sydney Ferries, State Transit and private bus services*
- *standard multi-trip tickets on public and private buses in the greater metropolitan area*
- *large benefits for commuters who travel more often or over longer distances*

⁴ As outlined in the Frequently Asked Questions for MyZone – <http://www.myzone.nsw.gov.au/faq.html>

⁵ MyZone FAQ “General” Section – *Why has the NSW Government introduced this fare structure?*

It is incongruous and inconsistent that *private bus services* are deemed suitable for inclusion in MyZone, but the current light rail service and its soon to be operational extensions are not. The stated reason:

Unlike private buses, these [ie light rail] services are operated without a Government subsidy and existing ticketing arrangements for these services will therefore apply.

overlooks the fact that private bus services formerly operated without a Government subsidy as a matter of public policy.

It was the Government that chose to alter this arrangement, motivated by the desire to achieve better integration, simplified fare structures and improved service delivery for passengers. It is difficult to follow the government's reasoning as to why it is sound public policy to extend subsidies to one public transport mode, namely the private bus industry by, for example:

- Spending hundreds of the millions of dollars on purchasing buses for private operators;
- Extending support for Pensioner Excursion Tickets and school passes under the School Student Transport Scheme.

while at the same time penalising another public transport mode, namely light rail, by excluding it from the MyZone scheme and its associated operational and ticketing benefits.

Passengers will be reminded on a daily basis of the incongruity, and the plain frustrating inconvenience of excluding light rail from the MyZone scheme when one observes the extent to which the current (and soon to be extended) light rail network is physically adjacent to other public transport modes, such as heavy rail and buses.

For example, a passenger intending to board the light rail at Dulwich Hill and alight at Lewisham in order to connect with the main Western heavy rail line will be unable to use their MyZone ticket for this part of their journey. They will reasonably ask why physical integration and fare integration are seemingly beyond the policy and technical capacity of the NSW Government?

EcoTransit Sydney is aware of the covenant between the NSW Government and the operators of the light rail that requires the service to be operated without a Government subsidy. We are also aware of a previous determination by former Transport Minister Michael Costa that deemed light rail a “luxury” service, apparently on par with taxis.

The characterisation of the light rail as a “luxury” service is an inaccurate description of its current operational profile and fails to take into account the service benefits that will result from the extensions from Lilyfield to Dulwich Hill and from Haymarket to Circular Quay via Barangaroo⁶. These include:

- Enhanced cross network connectivity by, for example, offering a direct north-south connection between the main Western and Bankstown lines for Inner West commuters;
- Increases in patronage flowing from the broader passenger catchments along the extended

6 “An expanded light rail network,” Metropolitan Transport Plan – http://www.nsw.gov.au/sites/default/files/uploads/common/5_MTP_10YearFunding_A.pdf, p. 32.

- routes;
- Directly, and sustainably, servicing the immense trip generator centered on the Barangaroo precinct.

For the travelling public, these benefits will not be fully realised if the light rail service remains segregated from the integrated fare system providing by the MyZone scheme. The nonsensical nature of the segregation is underscored by noting the extent to which the (present and future) light rail network is physically adjacent to other transport modes, whether they be the heavy rail or bus networks. According to the NSW government's apparent reasoning, being able to use the same ticket when alighting at a train station and then boarding a (private) bus represents a worthy societal and public transport outcome, but alighting at a light rail stop and then boarding a bus does not.

At the present time, approximately 3.5 million trips are made on the light rail service each year, and the service has enjoyed steady year-on-year growth in passenger numbers. In response to an enquiry from EcoTransit Sydney concerning the number of journeys undertaken by periodical ticket holders, Metro Transport Sydney reported in early 2008 that:

- 20% of patronage comes from weekly or annual ticket holders.
- Research showed that roughly 50% of all trips are made for work or business purposes.
- Most trips are by regular passengers who travel at least once per week, and many travel every day.

These are hardly the characteristics of a “luxury” or “boutique” service.

EcoTransit Sydney is supportive of the improvements that will flow from the integration of Sydney's public transport network via the MyZone ticketing scheme. However, the scheme as it stands fails to recognise the value of the (current and future) light rail service to Inner West and Inner City residents. Excluding light rail from the MyZone ticketing scheme will disadvantage it as a transport mode, effectively suppressing passenger demand. It militates against the NSW Government's stated policy aim of reducing road congestion through improvements in the utility and coverage of the public transport system, and thereby encouraging people out of their cars and onto public transport.

Engineering and Technical Assessment Issues

In addition to the track remediation measures outlined in the report, EcoTransit Sydney would recommend using this opportunity to raise the Parramatta Road rail bridge, as suggested in §6.3.9 “Underbridges:”

The Parramatta rail bridge is lower than the adjacent road bridge and has been subject to a number of impacts by over-height vehicles. A risk assessment will need to be undertaken of this issue to ensure that it is adequately protected for light rail. One option that is worth noting that there is an opportunity to lift the Parramatta Road bridge before the track and overhead wiring works are completed.

Raising the bridge would remove the potential operational risk to the light rail service posed by trucks colliding with and damaging the rail bridge.

Hierarchy of Light Rail and GreenWay Functions

EcoTransit Sydney is in strong agreement with the nominated hierarchy of light rail and GreenWay functions outlined in §7.2 “Functional Priorities for Light Rail and GreenWay within the Rail Corridor:”

In a meeting with NSWTI and GreenWay representatives on 8 April 2010, the following hierarchy was adopted for the assessment of the potential to integrate the proposed GreenWay with the light rail extension outlined in the Metropolitan Transport Plan (2010).

1. Light rail: two-way, two-track operation for the entire extension in the Inner West from Lilyfield to Dulwich Hill.
2. GreenWay:
 - 2a: Shared path Approximately 3 to 4 metres wide, predominantly grade separated;
 - 2b: Environmental considerations including maintaining high value green space and green corridors for fauna movement; and
 - 2c: Social and community functions.

We regard the above hierarchy as the correct framework in which to consider competing use cases for the rail corridor.

Light Rail and the GreenWay Project – Cycling and Habitat Issues

EcoTransit has consistently advised that the light rail extension and the GreenWay⁷ should be treated as a single project and believes that their design should have been handled through an Enquiry-by-Design process, however, the NSW Government has chosen not to proceed in this fashion. As the works involved are different in scale and complexity and can largely proceed independently of each other, the light rail extension and the GreenWay should be undertaken as two separate but integrated projects with close liaison between the two project teams and with community and local government representatives.

Given that the government has specified a dual track configuration for the extension of the light rail service to Dulwich Hill, EcoTransit Sydney is of the view that implementation of the light rail should proceed at the earliest possible opportunity. Those aspects of the GreenWay that relate to integration with the light rail service, such as pedestrian and cycling access, and (secure) bicycle parking facilities should begin as soon as the stop locations and detailed station designs have been completed.

The two projects would need to be particularly closely coordinated in relation to the construction of a cycleway designed to run largely within the rail corridor. In this case provision for culverts under road overpasses should occur during the light rail construction and remediation phase, but obviously be scheduled so as not to clash with light rail construction works. If culverting is delayed until after light rail services commence, there will be inevitable, but unnecessary, interference with light rail operations, additional expense and, probably, impact on bushcare sites.

EcoTransit Sydney has been a supporter of the GreenWay project and is largely in agreement with

⁷ www.greenway.org.au

the aims and outcomes outlined in the *Master Plan and Coordination Strategy for the Cooks River to Iron Cove GreenWay*⁸. However, there have been areas of difference in relation to the use of the rail formation.

While the GreenWay Masterplan envisioned a low frequency, low capacity and low utility light rail service for which a single track was deemed sufficient, EcoTransit Sydney was of the view that it was *vital*, in terms of public transport service levels and community benefit, that the twin track configuration was maintained, especially given that the maintenance of such a configuration did not have to be at the expense of cyclists and pedestrians.

EcoTransit Sydney notes that Mr Bruce Ashley of the Environment Works Pty Ltd prepared a report for the Roads and Traffic Authority entitled “Strategic Concepts for a Cooks River to Iron Cove Shared Path: Towards a GreenWay Trail for the Metro Sydney Strategic Cycle Network, Draft Final Report⁹.” This report served as the basis of the discussions in the GHD report which considered the extent to which the outcomes sought by the GreenWay project, as outlined in the Strategic Concepts report, were compatible with the dual track configuration intended for the extension of the light rail to Dulwich Hill.

The GHD report includes a diagram on p. 43 from the Strategic Concepts report showing three different cycleway concept route options. In general, the conceptual GreenWay options were developed following three general categories, as follows:

- Routes primarily within the Rozelle freight rail corridor formation (track area), referred to as *Red* route options;
- Routes within the railway corridor not in the formation (i.e. away from track area), referred to as the *Blue* route options; and
- Routes outside the railway corridor, referred to as the *Orange* route options.

The *Blue* route option proposed by the Environment Works uses an alignment along the western side of the rail corridor. EcoTransit Sydney believes that this route would result in an almost entirely grade-separated cycling and walking route running from Dulwich Hill to Lilyfield.

EcoTransit Sydney has proposed that shared path subways be built under five road bridges south of Lewisham that would otherwise force the cycleway out of the rail corridor.

Dealing with pinch points

One area of the GHD report that EcoTransit Sydney believes is deserving of additional investigation is the cost of dealing with pinch points along the route, particularly with reference to the overhead road bridges south of Lewisham. The report states on p. 49 that:

Given that light rail operations will require two tracks, the Orange and Blue GreenWay route options need to be further developed. Tunnelling under Old Canterbury Road under the Blue option would indeed be cost prohibitive, as indicated in the study.

⁸ <http://www.leichhardt.nsw.gov.au/DownloadDocument.aspx?DocumentID=9297>

⁹ “Strategic Concepts for a Cooks River to Iron Cove Shared Path: Towards a GreenWay Trail for the Metro Sydney Strategic Cycle Network, Draft Final Report” (The Environment Works Pty Ltd for the NSW Roads and Traffic Authority, February 2010).

EcoTransit Sydney recommends that additional investigation be undertaken to determine whether the provision of culverts under road overpasses is in fact “cost prohibitive.”

In response to earlier questions about the costs of this approach, EcoTransit Sydney sought information from a representative of Rocla, a Sydney-based preformed concrete products manufacturer, for a product that would enable cyclists and pedestrians to be safely routed around these pinch points, thereby ensuring the continuity of their shared path, while maintaining the dual rail track. As it turns out, an applicable product is available: prefabricated 3.6 x 3.6m culvert which comes in 2.4m sections.

The Rocla representative indicated that, as a rough guide, installation of these culverts at each overhead bridge would take between 4 days and a week. There are two ways to do this: cut-and-cover or "jacking through". With cut-and-cover, the road is closed and the culvert installed. Alternately, installation can be done by closing half of the road at a time. As three of the roads are lightly trafficked and easy alternative routes exist, the option of complete closure exists.

“Jacking through” is a process of pushing the culvert through by tunnelling ahead of it half a metre at a time and then pushing the culvert into that section. Obviously, more sections of culvert are added at the rear as the job progresses. This avoids the necessity to close off some services, shore up the sides of the cut or to close the road. We were advised that (subject to further technical assessment of matters such as the nature of the fill used for bridge ramps) an approximate cost would be \$10,000 per metre¹⁰ for materials and construction, meaning that pinch points at the five road bridges along the route could be remediated for less than \$2 million.

A graphic of how such a configuration could appear was prepared for the May 2009 edition¹¹ of EcoTransit News and is shown in Illustration 1. To quote from the caption, the illustration shows “the proposed Waratah tram stop at Davis Street, looking south, with a tram heading towards Dulwich Hill station. Cyclists and walkers enjoy a wide pathway with frequent rail crossing points and easy street access. The tram stop features abundant bicycle parking. Bush restoration has created a north-south migration route for native birds, mammals and reptiles.”

¹⁰ EcoTransit Sydney was also advised that this represented the basic retail price, and did not take into account volume discounts or the results of a competitive bidding process undertaken in response to a formal tender document.

¹¹ EcoTransit News, May 2009, http://www.ecotransit.org.au/ets/files/ETNews_0509_web.pdf



Illustration 1: Proposed Waratah Tram Stop at Davis Street

GreenWay Cycleway alignment options

Following a meeting between officers of the NSW Department of Transport and Infrastructure and representatives of the GreenWay Steering Committee and the Friends of the GreenWay at which they were advised that the NSW Government would be pursuing a dual track configuration for the light rail extension, Mr Bruce Ashley of the Environment Works prepared another concept plan for the GreenWay route. This concept plan¹² was derived from the *Blue* route that was proposed in the earlier Strategic Concepts report.

EcoTransit Sydney is largely in agreement with the cycleway treatment presented in the revised GreenWay concept map. One aspect of the treatment with which EcoTransit Sydney does not agree is the decision to switch from the western to an eastern alignment at Davis St, and to then switch back to the western alignment near the Dulwich Hill Station terminus.

EcoTransit Sydney is of the view that this is a suboptimal solution for cyclists, particularly when one considers the consequences:

1. The facility is going to be in place for decades;
2. It will require two crossings of the rail line (at Davis St and near the Dulwich Hill terminus) with chicanes and/or signalised crossing points;

¹² The concept plan is available at http://greenway.org.au/files/Greenway%20Integrated%20Concepts_v30April.pdf

3. There is (generally) more room on the western side, with a cycleway on the eastern side needing to be quite close to the tracks in places;
4. It will largely eliminate two important existing bush care sites on the eastern side of the corridor north and south of the Davis Street bridge ramp.

EcoTransit Sydney expects that the shared path will be a very popular cycling and walking route, particularly on the weekend when families with young children can be expected to take advantage of the car-free environment. It does not appear wise to force people using the path to make unnecessary crossings of the tracks. Meanwhile, the light rail operator will be faced with a constant stream of people waiting¹³ to crossing the track and potentially impeding light rail services.

The stated reason for the change in alignment from the earlier *Blue* route is that it would preserve bushcare sites along the western side of the rail corridor. However, this will be at the cost of bushcare sites along the narrower eastern side of the corridor.

Whatever the justification, it runs counter to the assessment hierarchy adopted at the meeting between NSWTI and GreenWay representatives on 8 April 2010.

EcoTransit Sydney notes that no representatives of local bicycle user groups were a party to the meetings at which the revised GreenWay concept was discussed and subsequently adopted by the GreenWay Steering Committee. Before being chosen as the basis of the cycling treatment within the GreenWay corridor, the revised GreenWay concept or the *Blue* route should be subject to detailed review by transport planners and engineers¹⁴ who specialise in the assessment and design of bicycle-related transport facilities.

An integrated cycle-priority precinct

An important aspect of the GreenWay concept is the creation of a cycle-friendly precinct in the GreenWay and light rail catchment. EcoTransit believes that the opportunity to formally create such a precinct should not be passed up. It would be popular, would maximise both light rail patronage and cycle-commuting and would constitute, at minimal expense, a model for such arrangements which could be implemented elsewhere.

An appealing aspect of the GreenWay concept plan is the creation of a zone, or *trellis*, of cycle-friendly low-speed streets on either side of the rail corridor. The idea is described in the GreenWay's *Master Plan & Coordination Strategy*, p. 7 in the following terms:

Creating a Trellis

A quiet street network providing easy and safe connections to a GreenWay "spine", improving active transport accessibility across the rail corridor and Hawthorne Canal and providing for improved streetscapes, amenity, stormwater management and biodiversity. This concept was put forward at the Marrickville Belonging community leaders project as the "Marrickville Trellis", to capture themes of a growing, linking, network which provided security and greater greenery. Such a network could be implemented progressively in conjunction with local initiatives for water sensitive urban design, traffic calming, bushcare

¹³ Assuming they are willing to wait. A signalised crossing would likely be treated in a similar manner to a signalised road crossing.

¹⁴ Eg, Jamieson Foley Traffic & Transport Pty Ltd and Sustainable Transport Consultants Pty Ltd

and community gardens;

Wildlife habitat and migration corridor

EcoTransit Sydney notes that the design of the GreenWay elements within the rail corridor should be predicated on the maximisation of useful habitat for resident and migratory native wildlife. It is important that the habitat needs of specific avian migratory species known to, or potentially, passing through Sydney should be considered in the design of habitat and the selection of flora for bushcare along the corridor. It is also important to maximise the usefulness of the re-established vegetation communities for small native mammals (particularly the long-nosed bandicoot) and reptiles. It is vital that disturbance of weedy, non-native vegetation be minimised during light rail and shared path construction and until such time as these areas can be progressively replaced by native species. To this end EcoTransit strongly recommends the establishment of a liaison and advisory group involving local community group representatives with qualifications in, and experience of, bush restoration.

Crafting a Cycleway Connection with the Anzac Bridge

EcoTransit Sydney has proposed a cycling and pedestrian facility called the *City West Cycle-Link* that extends from Lilyfield to the Anzac Bridge. This facility would:

1. Provide a cycling and walking tunnel running across and under the City West Link Road, from Darley Road in the west to Derbyshire Road in the east.
2. Closely integrate with the proposed Norton 2 (James St) light rail stop.
3. Connect with local street and benefit pedestrians who would no longer need to cross the slip lane running from the City West Link Road onto Darley Road;
4. Allow cyclists to bypass the climb up Lilyfield Road between the Hawthorne Canal and James Street;
5. Connect with and extend the cycling route along Darley Road proposed as part of the GreenWay project;
6. Provide a grade-separated alternative to Lilyfield Road by creating a comparatively flat and direct connection to the Anzac Bridge cycleway at White Bay via the Lilyfield rail cutting and the Rozelle rail lands.
7. When coupled with the GreenWay cycleway running along the western alignment between Dulwich Hill and Lilyfield, provide an essentially grade-separated route for cyclists and pedestrians between Dulwich Hill and Pyrmont via the Anzac Bridge.

The proposal has been included as a separate attachment to this submission.