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A submission to the

NSW Long Term Transport Master Plan

Prepared by EcoTransit Sydney
27 April 2011
Authorised by the Executive Committee of EcoTransit Sydney

The submission consists of 21 pages.

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Ms Carolyn McNally
Deputy Director General
Planning and Programs
Transport for NSW
GPO Box K659
Haymarket NSW 1240

27 April 2012

Dear Ms McNally,

Please find enclosed the submission from EcoTransit Sydney prepared in response to the NSW Long Term Transport Master Plan Discussion Paper.

EcoTransit Sydney[1] is a long standing, community-based, non-party political, public transport and active transport advocacy group. We are independent and do not represent — nor receive any assistance from — any private interests.

Yours sincerely,

John Bignucolo
Secretary
EcoTransit Sydney

1 www.ecotransit.org.au

The NSW Government and Transport Objectives

Section 4.4 of the *Long Term Transport Master Plan Discussion Paper* asks "What are the major energy challenges for the next 20 years?" It refers to the Peak Oil[2] and the commencement of the Australian Government's carbon pricing mechanism.

These are critical issues because the ready availability of a low cost energy source — namely, oil — has fundamentally underpinned post-1945 transport planning decisions in Sydney and NSW. It has led to the preponderance of funding flowing to road-based transport at the expense of light and heavy rail transport, particularly since 1988. It has also led to large areas of Sydney and regional NSW being completely dependent on the private motor car to meet the transport needs of the community. In this context, the NSW government should adamantly reject transport proposals that perpetuate this oil- and car-based dependence.

Peak Oil does not mean that we will run out of oil tomorrow. However, it does represent a steady decline in the production and availability of easily accessible oil[3]. This has been an extremely valuable energy source because of its high energy return on investment. Substitutes have a much poorer EROI and a higher cost.

The prudent inference that the NSW Government should draw from Section 4.4 of the *Long Term Transport Master Plan Discussion Paper* is that the age of abundant cheap oil-based energy is over.

This has profound implications for future transport planning and investment decisions. The discussion paper correctly notes that "the demand for oil continues and the cost of oil increases." The imperative should be to provide functional mobility within and between cities and major towns. It should be delivered via transport modes that minimise oil dependence — heavy rail, light rail and cycling — over those, such as motorways, which perpetuate that dependence.

The extent of under-investment in public transport in Sydney and NSW is evident in a comparison of the increase in the total metropolitan patronage on public transit in Australian capital cities since 1990[4]:

City	Sydney	Melbourne	Brisbane	Perth	Adelaide
% Increase	14.84	69.91	56.07	105.94	8.37

The much lower growth rate of Sydney is indicative of a lack of available capacity to cater for increased demand. While Melbourne, Brisbane, and Perth undertook substantial investment in new public transport infrastructure, particularly in (heavy and light) rail that catered for increased demand, NSW directed funds to motorway development.

Redressing that imbalance should be a fundamental objective of the *Long Term Transport Master Plan*.

Section 4.4 notes that the rail network is a large user of electricity. It is also the transport mode that is most easily amenable to having its energy needs met from renewable sources. The solution is for the NSW Government to invest in sufficient renewable energy capacity to ensure that the rail

2 http://www.energybulletin.net/stories/2010-11-11/iea-acknowledges-peak-oil
3 Global Energy Systems, Uppsla University. http://www.fysast.uu.se/ges/
4 Cosgrove, David C. "Long-term patterns of Australian public transport use", p. 5. http://www.atrf11.unisa.edu.au/Assets/Papers/ATRF11_0030_final.pdf

network is able to be wholly decoupled from coal-fired electricity grid.

It has been noted[5] that:

> Public transport in Sydney is already 2.7 times more energy efficient per passenger-km than cars. Furthermore Sydney's rail-based public transport could be run on 100% greenpower now, for only around $28m pa extra in electricity costs.

This suggests that investing in light rail and heavy rail public transport across NSW, powered from renewable sources, will be an extremely cost effective way of achieving a meaningful reduction in greenhouse gas emissions from the NSW transport sector.

5 A 30 Year Public Transport Plan for Sydney" Dr Garry Glazebrook, p. 10. http://www.dab.uts.edu.au/research/outcomes/30yr-sydneytransport-plan.pdf

Sydney Transport

A detailed transport plan for Sydney

EcoTransit Sydney does not intend to present a detailed transport master plan in this submission. However, we would strongly urge the NSW Long Term Transport Master Plan Project Team to seriously investigate the following two detailed, coherent, and comprehensive plans. Focussed on improving the public transport system in Sydney, each could serve as an ideal basis of what a *Long Term Transport Master Plan* for Sydney should embody:

- The "European Option" presented as part of the *Independent Public Inquiry, Long-Term Public Transport Plan for Sydney*[6]*,* chaired by Mr Ron Christie.
- *A 30 Year Public Transport Plan for Sydney*[7]*,* by Dr Garry Glazebrook.

In addition to the above detailed plans, Appendix A, B and C of this submission presents overviews of projects that would materially improve:

- The capacity and throughput of the CityRail network;
- The light rail network in the Inner West, CDB, and Inner South;
- Cycling conditions for riders travelling between Five Dock and the CBD via Anzac Bridge.

They are examples of the kind of transport infrastructure investments that the NSW government should seek to undertake in the coming years.

Prioritising investment in the heavy rail and light rail networks

Question 4 in the Discussion Paper asks "In solving the transport problems in Sydney, what transport mode should be the first priority for new investment, bearing in mind the need for a socially equitable and environmentally sustainable transport sector?"

In the view EcoTransit Sydney, the mode that should be the first priority for new investment is heavy rail with the second priority being given over to light rail.

The changing energy, climate change and carbon pricing profile outlined in the discussion paper is having measurable effects on transport patterns in Sydney. Vehicle Kilometres Travelled in Australian capital cities, including Sydney, has been steady for 8 years[8]. This is despite a growing economy and a growing population. Per capita VKT[9] (all road modes) is declining sharply. This is also an international trend.

Meanwhile public transport patronage is increasing sharply where spare capacity allows it to do so.

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6 Independent Public Inquiry, Long-Term Public Transport Plan for Sydney (2010) Independent Public Inquiry into a Long-Term Public Transport Plan for Sydney: Final Report — Themes and Recommendations, 26 May 2010, submitted to and published by The Sydney Morning Herald. ISBN 9780980814125

7 "A 30 Year Public Transport Plan for Sydney" Dr Garry Glazebrook, http://www.dab.uts.edu.au/research/outcomes/30yr-sydneytransport-plan.pdf

8 "Australian transport statistics Yearbook 2009." Bureau of Infrastructure, Transport and Regional Economics. pp. 57-66, pp. 74-75. http://www.bitre.gov.au/publications/2009/stats_001.aspx

9 Bureau of Infrastructure, Transport and Regional Economics (BITRE), March 2012, "Traffic Growth in Australia", Report 127, Canberra ACT. pp. 44-46. http://www.bitre.gov.au/publications/2012/files/report_127.pdf

The problem for Sydney is that it has very little spare capacity. On some routes and modes we are already at capacity.

There is also a strong aspect of social justice is prioritising investment in the heavy rail and light rail networks. Based on the *vulnerability assessment for mortgage, petroleum, and inflation risks and expenditure (VAMPIRE)* assessment model developed at Griffith University, it is precisely those areas of Sydney which don't have ready access to the rail network that are most car dependent and most susceptible to the impact of high oil prices[10].

The index, which measures the extent of household exposure to the impacts of higher fuel prices and mortgage interest rates, has shown a deterioration since 2000, reflecting the surge and maintenance of high oil prices since that time.

In developing a socially just and economically realistic response to this problem, the NSW government show seek to invest in extending the heavy rail and light rail networks so that these vulnerable communities are protected, and are able to benefit from having the same transport options as those people fortunate enough to live in those suburbs that have ready access to the rail system.

Sydney's heavy rail network is an enormous asset created for us by past generations. The basic excellence of John Bradfield's work on the City Circle line and the Harbour Bridge allowed suburban rail to run right into and through the CBD, a situation which is the envy of most global cities.

Unfortunately government policy during the age of abundant petroleum availability (1950 – 2005) neglected to augment this legacy in a sufficient and timely fashion. There were few significant extensions to serve new suburbs and no augmentation of capacity through the CBD and across the harbour. This has left the heavy rail system with almost no spare capacity.

Since construction of the first line in the 1850's, the Sydney rail system has evolved into **a complex, unified network**, representing over 150 years of social investment. It has been suggested that the network should be privatised and broken down into separately operated lines. EcoTransit Sydney is of the view that this would yield a poor operational outcome and a corresponding poor service for passengers. This has certainly been the Melbourne experience.

The NSW government has a responsibility to run the NSW rail network in as efficient manner as possible and in the public interest. Recent governance failures have resulted in a lower and slower level of service than that of thirty years ago. The government should seek, as a matter of urgency, to aim to return to an operational level of 26 trains an hour through the main CBD lines, which was the standard in past years.

The most urgent tasks for Sydney are:

- Augmentation of capacity through the CBD and across the harbour by the addition of two tracks from south of the CBD in the vicinity of Redfern to Chatswood. This will allow services at all stations in the network to be increased by up to 50 per cent. More frequent services means less waiting time and therefore faster point-to-point travel.

10 "Unsettling Suburbia: The New Landscape of Oil and Mortgage Vulnerability in Australian Cities," Jago Dodson and Neil Sipe, Urban Research Program, Giffith University, August 2008. http://www.griffith.edu.au/__data/assets/pdf_file/0003/88851/urp-rp17-dodson-sipe-2008.pdf

- Bringing light rail to serve those major routes where bus services have reached capacity. Light rail is capable of doubling capacity on those routes as well as fostering sustainable urban renewal. The key task for light rail in the short term is to replace the maximum number of buses serving the CBD. Scope exists for the reintroduction of light services to the East and Inner South of Sydney, as well as the Inner West.

- Reorganising bus services to focus on high frequency services, 'pulse connectivity' and the elimination of unnecessary duplication of services along the same route[11]. Bus services should be used to provide frequent and efficient feeder services to stations on the heavy rail (and in some instances) the light rail network.

- Fostering a widespread return to cycling, especially for commuting trips of less that 5 kilometres. This will free-up road space (and take the pressure off bus services in particular). This is a cheap way of keeping people functionally mobile without cars.

- The introduction of an integrating ticketing system based on a simplified fare structure for public transport users. The design of the ticketing system should be predicated on:

    i. The provision of seamless integration of different public transport modes. It should not incorporate flagfall charges that penalise passengers transferring between modes when completing their journeys.

    ii. Recognising and properly accounting for the economic, health and environmental benefits of the reduced externalities — particularly congestion and pollution — that result when people use public transport to undertake their journeys[12].

    iii. Not designing the system for the sole or primary purpose of maximising cashbox income.

    iv. Not assessing the benefit and utility of public transport services to the community based solely, or largely on the extent of their ability to recoup costs via the cashbox.

Tackling the overcosting issue

An absolute requirement for the successful delivery of any light rail or heavy rail projects included in the Long Term Transport Plan is a commitment on the part of the NSW government to ensure that the costs of rail projects are estimated in a manner consistent with best practice and, in the Australian context, the empirical assessment model used in Western Australia.

EcoTransit Sydney has been concerned[13] for some time over the NSW government's rail planning and project cost estimation practices[14]. Project cost estimates have been consistently – and very substantially – higher than those of comparable international and Australian government transport

11 "Human Transit: How Clearer Thinking about Public Transit Can Enrich Our Communities and Our Lives", Jarret Walker, Island Press, 2011.

12 A similar argument can be made in favour of spending on infrastructure to encourage commuter cycling and for trip substitution by bicycle.

13 Letter from EcoTransit Sydney to Infrastructure Australia, 3 February 2009

14 http://www.crikey.com.au/2009/03/26/why-rail-projects-in-nsw-cost-three-times-as-much-as-they-should/

agencies. The poor benefit-cost ratios associated with rail (whether heavy or light) project proposals has resulted in a substantial under-investment in heavy rail and light rail projects across NSW, particularly when compared with other states and comparable OECD economies.

EcoTransit Sydney's concerns were outlined in some detail in its submission[15] to the *Inquiry into rail infrastructure project costing in NSW*[16] undertaken *by* the Legislative Council's General Purpose Standing Committee No. 3, and we refer the Project Team to the submission for more details.

A public transport renaissance will be impossible unless the over-costing of new heavy rail and light rail public transport infrastructure is ended and NSW costs brought back within world norms.

Observing the manner in which critical NSW rail projects (both heavy rail and light rail) have either failed to be built, or have been built at an inexplicably high cost, or delayed by decades, has been a matter of serious concern for anyone who takes seriously the importance to a modern society of a functional, well maintained and comprehensive rail system. Such a system is vital to enhancing sustainability, improving land use planning outcomes, reducing fossil fuel dependence, reducing congestion costs, ameliorating social disadvantage and enhancing community amenity across Sydney and NSW.

The radical overhaul of rail project planning, funding and construction processes initiated under the Greiner Coalition government in 1988 and continued by its Labor successors has led to a loss of professional engineering, design and project planning capacity within the NSW government in relation to rail projects.

The void has been lucratively filled by engineering consultancies and construction companies whose primary purpose is not to serve the public interest, nor to maximise the return on taxpayer funds, nor to develop a coherent, efficient rail transportation network serving Sydney and NSW, but solely to benefit a narrow private interest.

With (detailed) project design, estimation and management outsourced to engineering consultancies, and with insufficient independent, internal technical capacity to rigorously assess and challenge the resulting costings.

We note Recommendation 7 from rail costs inquiry's report which states:

> *That Transport for NSW examine increasing its in-house expertise to reduce its over reliance on consultants.*

The processes by which NSW government agencies arrive at such estimates remain utterly opaque to the general public. Similarly opaque has been the role played by engineering consultancies in the planning, assessment, cost estimation, design and management of rail projects. These private entities, whose interests are not congruent with the public interest, have had outsourced to them tasks previously considered the core duties of government. Nor has the role of Treasury in adjusting upwards rail project cost estimates been adequately investigated.

The recent *Inquiry into rail infrastructure project costing in NSW* has provided some shed some light on why rail project costs in NSW are so high. Finding 1 of the rail costs inquiry states:

> *It costs slightly more to build new railway infrastructure in New South Wales compared with other jurisdictions in Australia.*

We note that this is only true for those jurisdictions that have adopted the P90 estimation method

15 EcoTransit Sydney submission to *Inquiry into rail infrastructure project costing in NSW.* 21 September 2011 http://parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/EFE02A3E350CA34ACA25793000166F74

16 http://parliament.nsw.gov.au/Prod/parlment/committee.nsf/0/226DCE7655B83DB2CA2578E3002AE363

used in NSW. In jurisdictions that have not adopted P90, estimated and final costs for rail projects are a fraction of those in NSW. (The report ignored overseas rail project costs.)

In those jurisdictions, such as Western Australia that adopt an empirical approach, the demonstrated cost of rail projects are substantially below those of NSW. Judging by the timeliness and cost of its rail projects, one can reasonably conclude that the citizens and taxpayers of Western Australia are being far better served by their government than the citizens and taxpayers of NSW. As noted on page 13 of the final report:

> Mr Martinovitch, Executive Director, Infrastructure Planning and Land Services, Public Transport Authority of Western Australia, explained to the Committee that in the rail construction work the Authority undertook in Perth, the idea was not to come up with a cost for a project that was based on probabilities, it was a cost based on what they had to do to overcome the risk in a project. He noted that the best cost estimate is achieved when you know exactly what works need to be done, which was the approach he and his team used in rail planning work in Perth:
>
> > ...the best cost estimate you can do is to imagine something that has just been built and to tell someone to cost it. You might say that that is a ridiculous example because it would be easy to do because you know exactly what has to be done. That is what we tried to do in this case. As I said, you have to be very careful that you know exactly what is going to be built--as far as is humanly possible. Whatever effort it takes, you must do it. That was one example of where you do not start doing that sort of work until you are absolutely sure of the outcome.

Unless the costing issue is addressed, the NSW government may find itself incapable of approving let alone delivering any of the rail projects deemed vital to improving public transport in NSW due to the inevitably poor benefit-cost ratios of P90-estimated projects.

The NSW government runs the risk of emulating the 1998 *Action for Transport* plan in which all the nominated road projects were completed. Indeed the RTA over-delivered, constructing additional large projects, such as the Cross City Tunnel and Lane Cove Tunnel, that were not even referenced in the policy. On the other hand, almost none of the rail projects nominated in *Action for Transport*[17] gained planning approval, let alone being completed.

17 http://en.wikipedia.org/wiki/Proposed_railways_in_Sydney#Action_for_Transport_2010.2C_1998

Appendix A - A Common Sense Solution For Sydney's Biggest Rail Dilemma

The biggest dilemma confronting Sydney's rail system is the lack of line capacity into the Central Business District (CBD), from the North across the Harbour Bridge and from the West and South, past Central to the five CBD stations (not including Martin Place).

During the peak period, the North Shore Line and the City Circle are at or near capacity between the hours of 6.30am and 9.30am. The need to have more services into the CBD increase every year as demand grows.

What is the solution to this problem, one that is within the ability of governments to fund and can be delivered in the shortest possible time? That is the question that EcoTransit Sydney's solution addresses.

EcoTransit's solution is a common sense approach to addressing the need to increase rail capacity in the CBD and is affordable and can be delivered within five to ten years. Not all of this solution is original, there have been similar proposals put forward before and EcoTransit's solution draws on these proposals and adds new ideas to increase City Rail's network capacity.

This solution offers more than increased rail capacity, it also offers improves access to the CBD by buses, coming from north of the Harbour.

The positive key points that support EcoTransit's solution are:

- Uses existing infrastructure to save cost and shorten delivery time.
- Can be delivered at an affordable price.
- Increases the capacity of the Harbour Bridge (HB) by up to 40% by re-allocating the use of traffic lanes.
- Reduces overcrowding on existing CBD stations by increasing station capacity or providing alternative stations to access the Rail Network.
- Provides 60 additional pathways for trains from the North, between 6.30am to 9.30am.
- Allows more commuters to access the CBD directly by train without having to change trains at Central.
- Can be built and commissioned in stages, to get the benefit to commuters more quickly and make budgeting for the project more manageable.
- Allows all existing Double Deck (DD) trains to be used on the new line.
- No requirement to introduce "Metro" style Single Deck (SD) trains to try to increase capacity, which would need billions of dollars spent on resignalling and add significantly to maintenance and operational costs of the entire network.
- Will add additional kerb space in the CBD for buses coming from north of the Harbour.

There have been many other proposals that have been put forward, including a deep level tunnel under the Harbour and a second deck, slung under the existing deck of the HB. All of these proposals are very costly and because of this are very unlikely to be built, or if they are, the solution to capacity restraints on City Rail Network will be delayed for many years to come.

EcoTransit's solution to the capacity restraints in the CBD rail network is the commonsense use of existing infrastructure and can be built in stages, as described below:

STAGE 1

Two additional tracks from Chatswood to Wynyard, via Crows Nest, North Sydney and across the Harbour Bridge. This is shown in Illustration 1.

STAGE 2

Conversion of the Cahill Expressway, above Circular Quay, to a bus station and transport interchange between buses, rail, ferries and the future light rail. The conversion would still allow for a lane of general traffic in each direction. This is shown in Illustration 2.

STAGE 3

Two new tracks from Wynyard to Central, underground following the reserved Pitt Street rail corridor, with a station near World Square.

A station under Pitt Street, between King Street and Park Street could be included, but would add significant cost to this stage. This is shown in Illustration 3.

STAGE 4

Connecting the new line at Central to the City Rail network, to the Western line.

STAGE 5

Connecting the new line at Central to the Illawarra line.

CONCLUSION

Many proposals have been put forward for a rail crossing of the Harbour. None of these proposals have any chance of being adopted and of actually being built. Generally, they are too costly and would take many years to complete.

EcoTransit's commonsense solution is both low cost and can be staged, to gain the benefit of a second harbour crossing, in a shorter period of time. It does not require permanent land acquisition and uses a lot of existing infrastructure that the people of New South Wales have already paid for.

This solution will double the capacity of rail across the Harbour Bridge and make the planned North West Rail Line (NWRL) more viable. Without this extra capacity, only six additional trains can be run into the CBD, from Chatswood during the peak period.

EcoTransit will release a detailed proposal in the future, which will elaborate on and provide details of this commonsense solution to Sydney's major public transport problem.

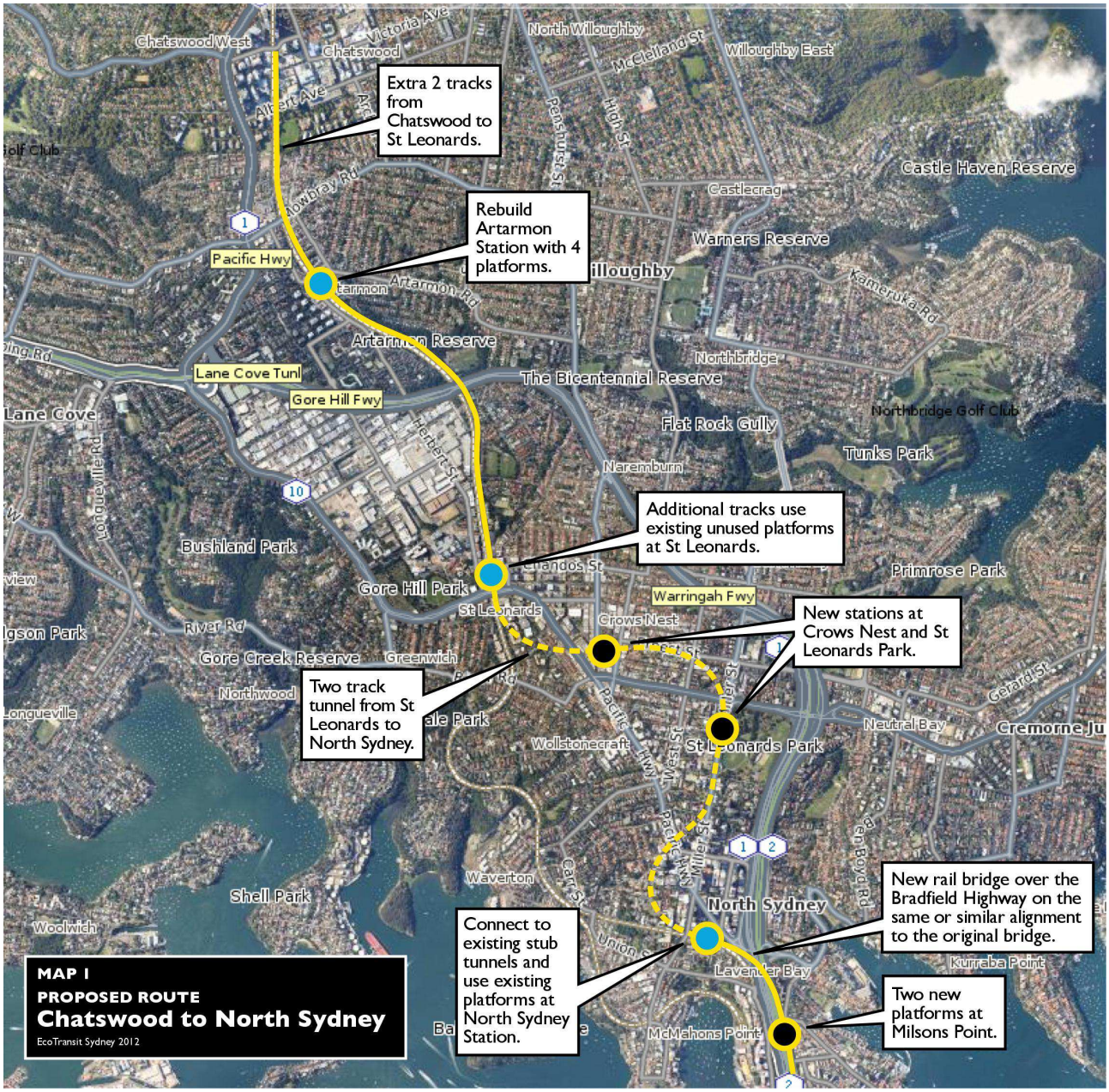

Illustration 1

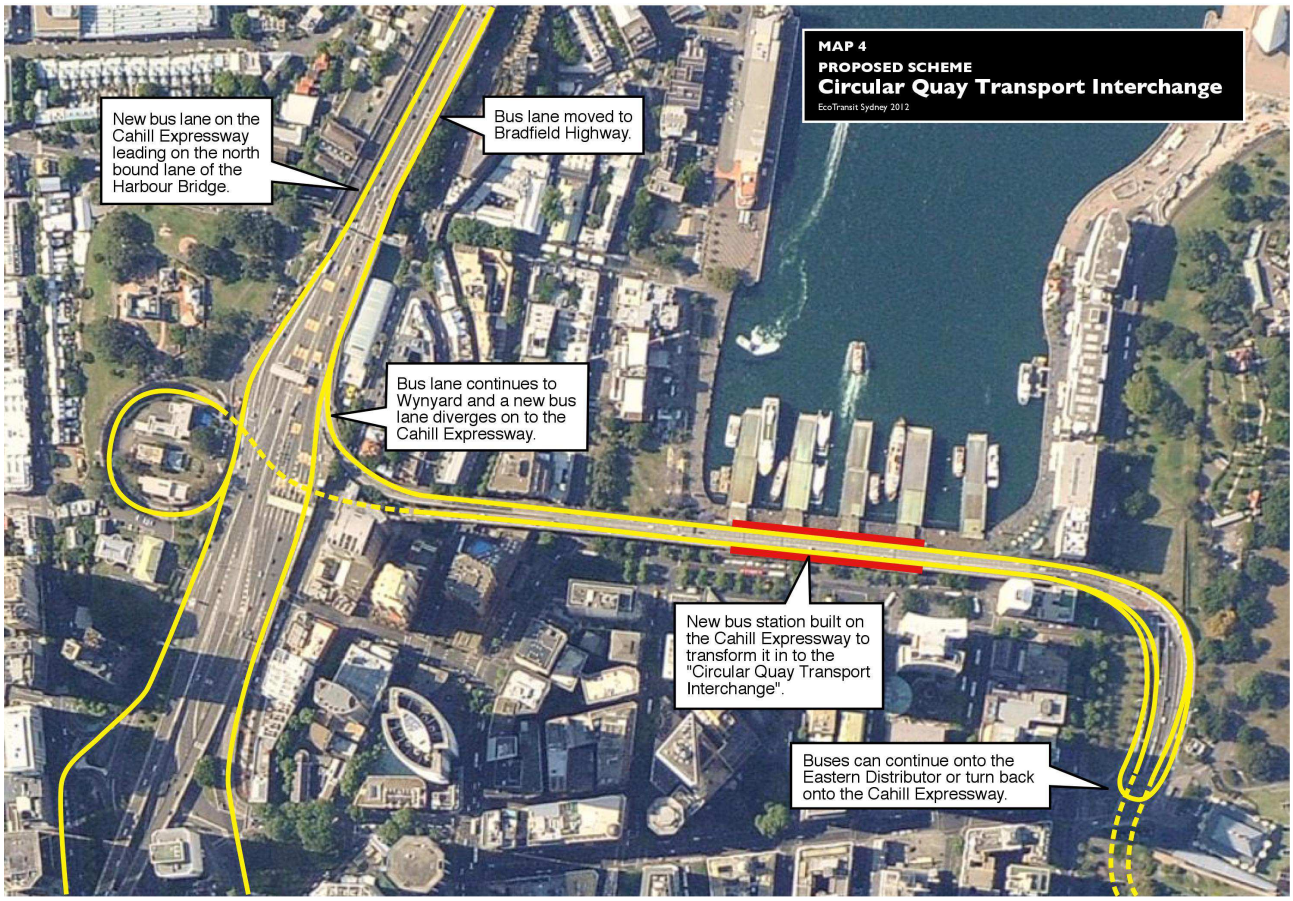

Illustration 2

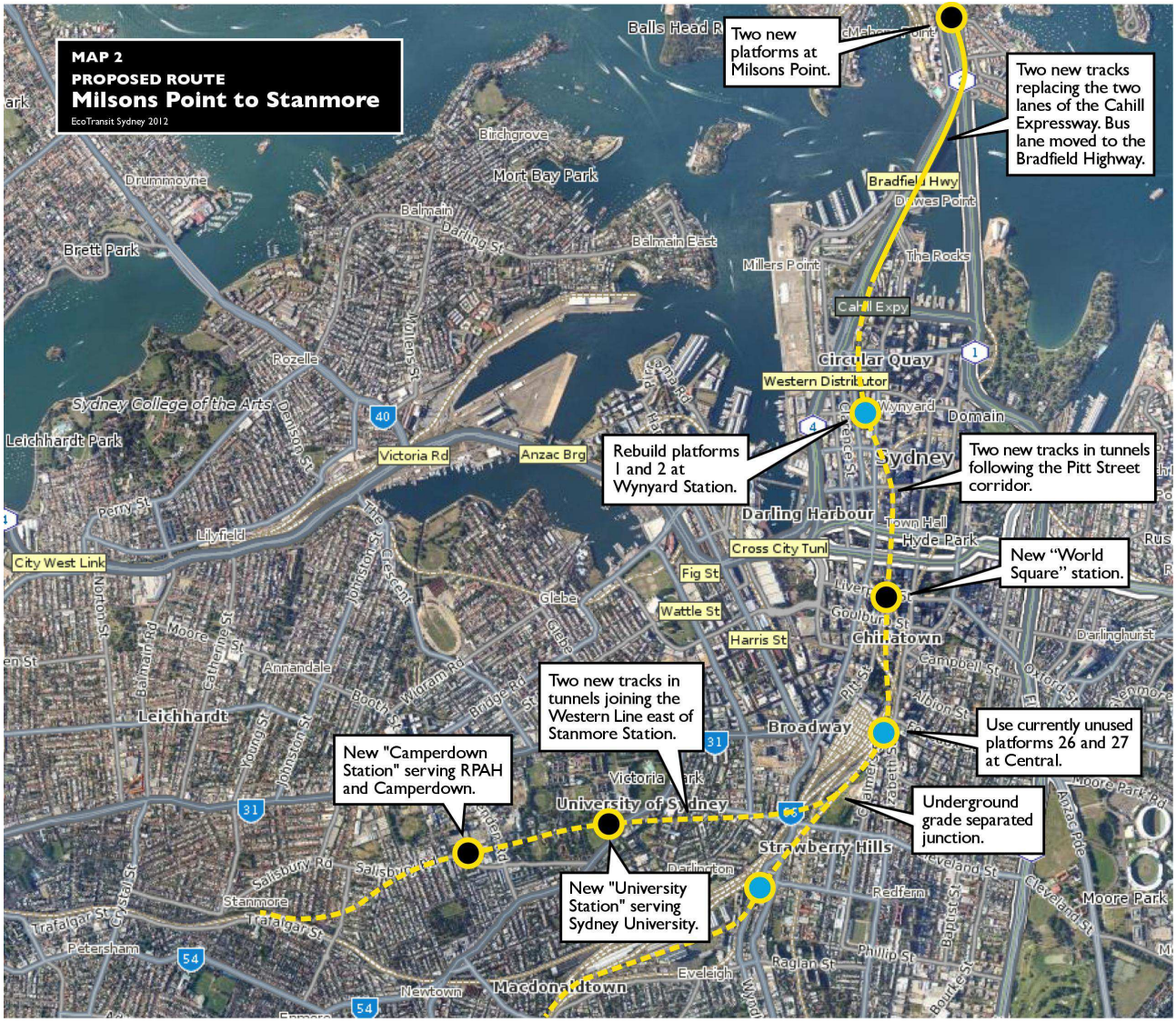

Illustration 3

Appendix B – A light rail orbital network connecting the Inner West, Barangaroo and the CBD

EcoTransit Sydney has proposed a light rail orbital network that would connect the Inner West to Barangaroo and the northern CBD. It is based on a new transport link dubbed the White Bay Green Link.

The White Bay Green Link (WBGL) concept is a combined light rail route and cycleway running from Lilyfield light rail stop to the Barangaroo precinct and the northern CBD via the existing, now unused, White Bay rail corridor and a tunnel beneath the Balmain Peninsula and under Darling Harbour.

This new route would create a direct express corridor (or 'arc') from the inner west to the northern and central CBD and would act as the spine on which a more comprehensive light rail and cycling network would, by steps, serve a widening commuter catchment.

The WBGL would transform the Barangaroo precinct from an enclave with poor public transport into a major public and active transport entry point for the CBD.

The broader planning context

The WBGL concept represents a bold solution to several important planning imperatives for the City of Sydney and the wider metropolis. It addresses the need to:

- Future-proof Sydney in the face of declining oil supplies.
- Reduce reliance on buses for access to, or circulation within, the CBD in favour of a modern and more efficient light rail system.
- Reduce the carbon footprint and the air pollutant load associated with the current, heavily congested transport mix of private vehicles and buses.
- Provide fast commuter access to Barangaroo from Sydney's west and inner west, without putting additional stress on the heavy rail network[18].
- Reduce the volume of car traffic entering the CBD via Victoria Road and the Anzac Bridge, and diffuse predictable acute congestion points.
- Relieve pressure on CBD heavy rail stations, especially Wynyard and Town Hall.
- Increase cycling's share of commuter trips to and from the CBD.
- Simplify and speed up access to the central and northern CBD from the west and the north-west.

An overview map of the proposal is shown in Illustration 4.

18 Please see the description of the *East-West TransLink* for an overview of how light rail and heavy rail can be combined to greatly improve public transport access from South West Sydney to Sydney Airport, the Central Industrial Area, the Randwick education and health precinct, and the CBD. http://www.ecotransit.org.au/ets/ets_acf_nine_point_plan

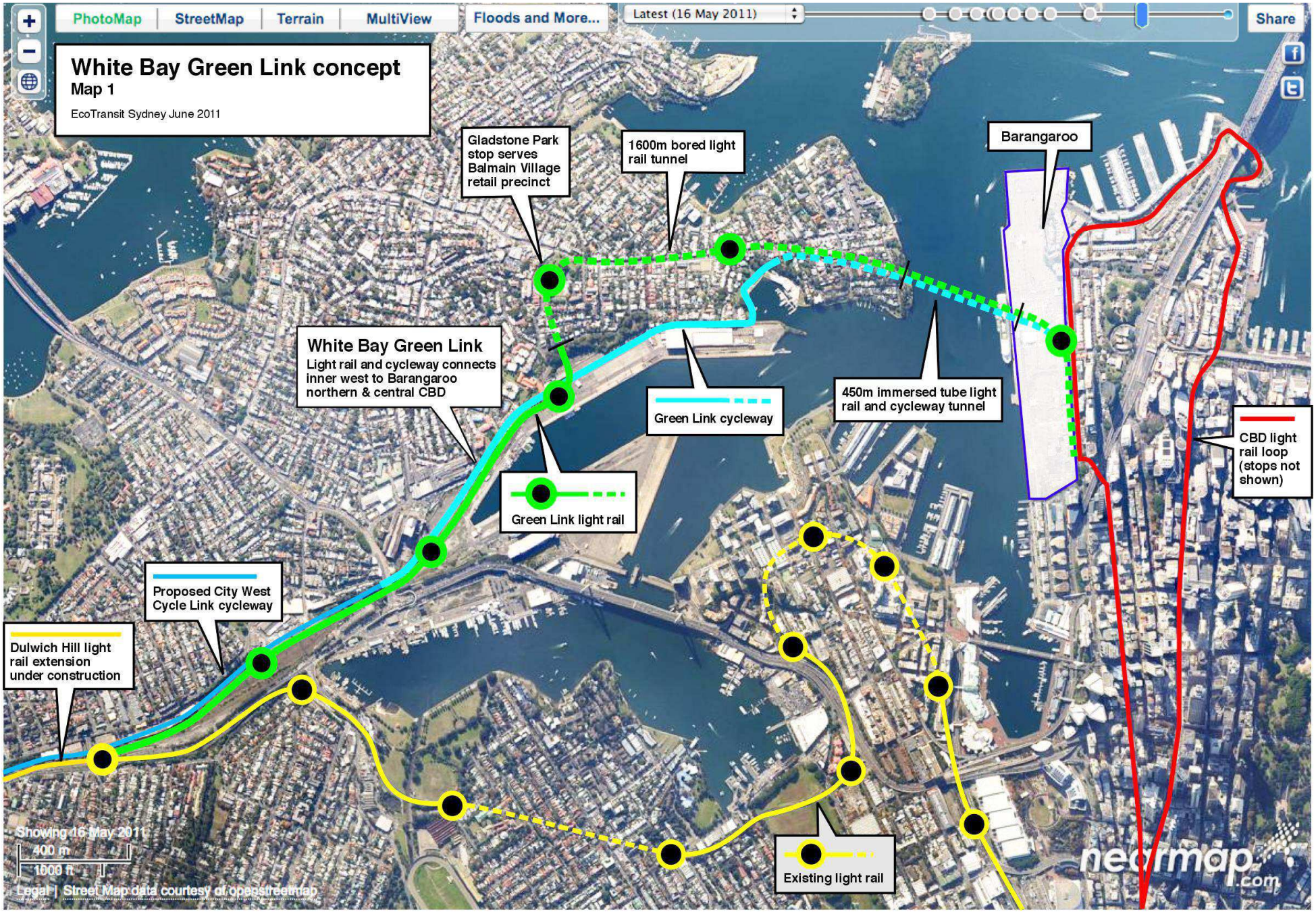

Illustration 4

Population growth in the City of Sydney and adjacent suburbs

The development of Barangaroo will serve to reinforce the recent trend of people choosing to live and work in the CBD and surrounding local government areas. Recent figures from the Australian Bureau of Statistics[19] indicate that strong population growth being experienced by the City of Sydney and adjoining local government areas.

The response to increasing public transport demand associated with demographic and employment changes has been an increase in the number of bus services entering and terminating in the CBD. Additional services will be required to service the demand for access to Barangaroo.

Congestion, partially due to the number of bus services converging on the CBD from all directions, is having a negative effect on the ability of buses to provide a timely, and time efficient, transport mode for passengers. The major north-south axes (George St, York St, and Castlereagh St) are already at capacity, while the east-west axes, particularly those fed from Victoria Road and the Anzac Bridge and also congested.

The White Bay Green Link, on the other hand, would provide an additional, **grade-separated** public transport capacity from the Inner West to the central and northern CBD.

The White Bay Green Link as a Barangaroo transport solution and network multiplier

In its present form the Barangaroo scheme would be an isolated enclave insufficiently supported by public transport capacity for its expected 23,000 workers and residents.

Its access relies too heavily on Wynyard station from which the site can be reached only by a long walk or on the CBD's planned light rail loop which is itself, in its present form, anchored on Central Station in the extreme south of the CBD, making it an inefficient compromise for commuters.

Development of the precinct in the currently planned scheme will therefore place unsustainable amount of additional car traffic on overcrowded CBD streets – an unacceptable and counter-productive outcome.

Further exacerbating congestion is the extent to which public transport from the inner west to the central and northern CBD relies almost completely on buses entering the CBD on an indirect route via the Anzac Bridge or Parramatta Road, Broadway and George Street. The WBGL would resolve this situation (which is bound to be worsened by the planned concentration of workers and residents in Barangaroo) by making Barangaroo the main access point for commuters from the inner west and, via future light rail extensions along Victoria Road, the inner north-west.

Combined with the Dulwich Hill light rail extension currently under construction, the WBGL will create an 'arc' through the inner west, allowing light rail to expand into an integrated network catering for inner Sydney. With the WBGL solution in place, commuters from these regions of

19 Tim Brooker, Abdullah Uddin; The Future Inner Sydney Light Rail Network. http://www.atrf11.unisa.edu.au/Assets/Papers/ATRF11_0024_final.pdf

Sydney would save as much as 30 minutes on current peak period journey times.

This role could be enhanced by strategically located park-and-ride stations, large-capacity bicycle lockups and light rail–bus interchanges, on the existing and future light rail system.

As this network expands and more people rely on the WBGL to enter the city it will considerably reduce the number of private vehicles and buses on Inner Sydney roads.

An overview map showing the role of the White Bay Green Link within a broader light rail network is shown in Illustration 5.

Connection to the CBD, Eastern Suburbs and Inner South light rail lines

The WBGL light rail would connect to the planned CBD light rail loop at Hickson Road. The immediate priority being for a comprehensive service to Barangaroo and the central CBD, the WBGL link would, in the first instance, proceed south towards the centre of the Barangaroo precinct where the line would join the CBD loop at Napoleon Street. A second stage extension would proceed north along Hickson Road, under the Harbour Bridge and around to George Street.

The link could also be extended in a short tunnel to Wynyard at which point it could link up with existing tunnels to St James Station and on as far as Whitlam Square.

Further details on White Bay Green Link proposal are available at the EcoTransit Sydney website[20].

20 http://www.ecotransit.org.au/ets/whitebay_greenlink

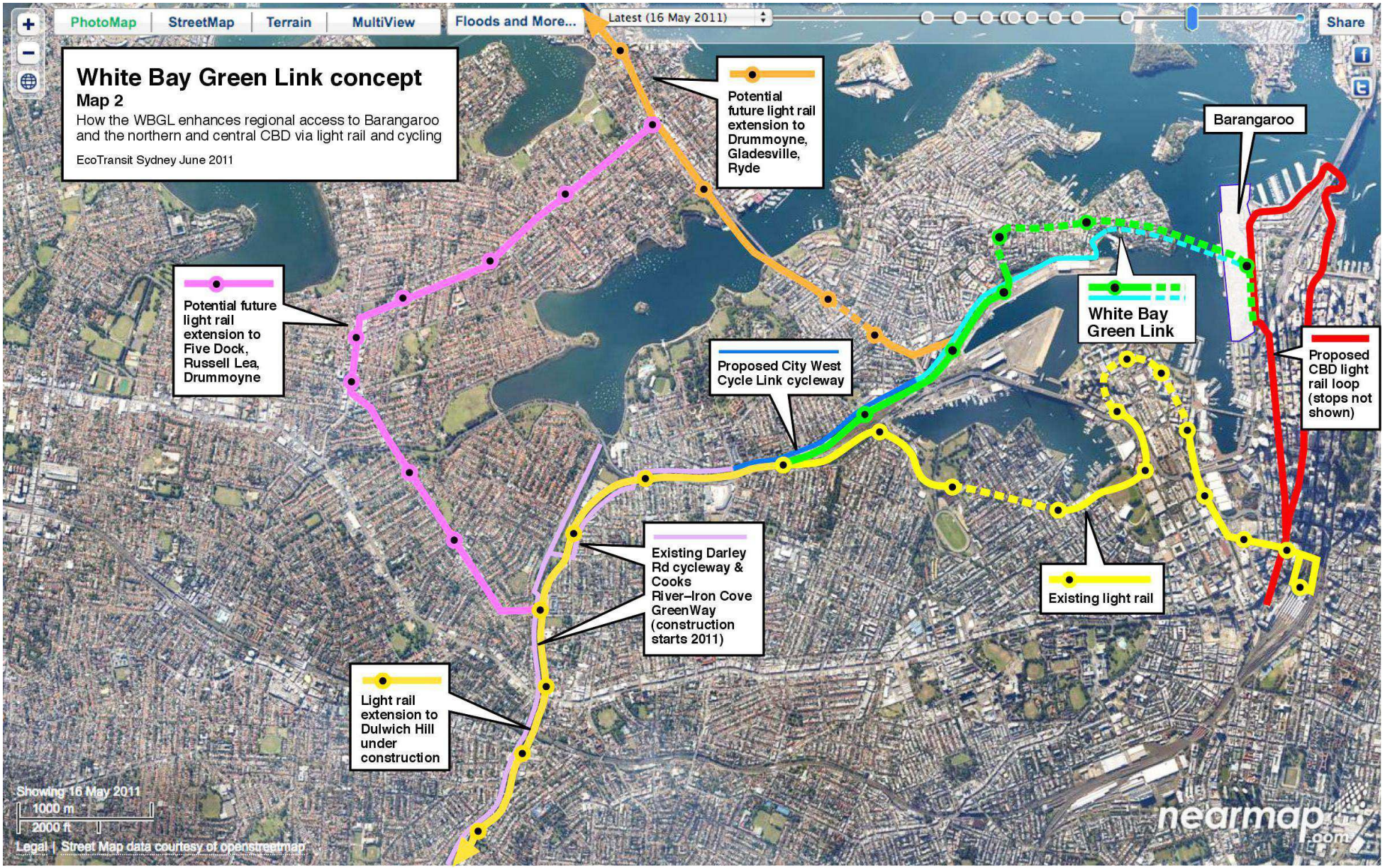

Illustration 5

Appendix C – The City West Cycle-Link

At the present time, cyclists from the Inner West who are riding towards the Anzac Bridge and the City of Sydney typically follow a route through Five Dock and Haberfield that leads them onto Lilyfield Road at the Hawthorne Canal. At this point they are faced with a short, but steep climb up to James Street. This climb is often seen as daunting and unappealing by less experienced cyclists.

Cyclists using the new cycleway route associated with the GreenWay component of the Dulwich Hill light rail extension will face a similar situation. The GreenWay cycleway, which will provide a grade-separated route for cyclists travelling to and from the City of Sydney from the Marrickville, Ashfield and Leichhardt local government areas connects to the Lilyfield Road regional route at the same location.

For cyclists heading towards the Anzac Bridge, there isn't an alternative route of similar convenience and directness to Lilyfield Road. Immediately to the south is the City West Link Road and the Rozelle Rail Freight Line. It should be noted that the six (plus turning and associated slip lanes) of the City West Link Road present a barrier for cyclists and pedestrians attempting to cross it. Beyond these barriers, the route towards the Anzac Bridge becomes slower, hillier and more circuitous than the alignment along Lilyfield Road, which essentially runs parallel to the City West Link Road.

The 3.3km Lilyfield Road portion of the Inner West regional cycling route, is not without its problems for cyclists. These problems include:

- The route is hilly and indirect, especially in comparison with the flat profile of the immediately adjacent former Rozelle rail yards;
- The ongoing risk of being “doored” along most sections of Lilyfield Road where the marked cycle-lane is directly adjacent to parked cars
- The requirement to cross Victoria Road at White Bay via a narrow pedestrian overpass.

To improve connectivity and amenity for all cyclists, but especially for those cyclists commuting to and from the Inner West to Pyrmont, the CBD and beyond, EcoTransit Sydney proposes a facility whose benefits for cyclists are outlined below. The facility would:

1. Provide an at-grade cycleway through the Lilyfield rail cutting, adjacent to the rail formation, from Charles St in the west to Catherine St in the east, that would pass under the City West Link Road;
2. Integrate with the Leichhardt North light rail stop (adjacent to James St), increasing the flow of people in the vicinity of the stop, and thereby enhancing the sense of safety of light rail commuters;
3. Retain the twin track rail formation for light rail services, thereby maximising operational flexibility and service capacity;
4. Allow cyclists to bypass the climb up Lilyfield Rd between Hawthorne Canal and James St;
5. Connect with and extend the cycling route proposed as part of the GreenWay;
6. Provide a high quality, grade-separated alternative to Lilyfield Rd 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. This cycleway would pass under Victoria Rd and provide connections to local streets.

7. Reduce travel times for Inner West cyclists commuting to and from the City of Sydney via the Anzac Bridge cycleway.
8. Increase cycling usage by encouraging cyclists who are not comfortable riding on the road to use a properly grade separated facility.

The estimated cost of the proposal, based on professional engineering advice, is less than $5 million.

Further information on the City West Cycle-Link[21] is available at the EcoTransit Sydney website.

21 http://www.ecotransit.org.au/ets/citywest-cyclelink