BEACHES LINK AND GORE HILL FREEWAY CONNECTION ENVIRONMENTAL IMPACT ASSESSMENT

OBJECTION SUBMITTED BY EDWARD PRECINCT, NORTH SYDNEY
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Introduction

This submission is made by Edward Precinct, following moderately detailed review of the EIS main report and selected appendixes. A draft of the submission was circulated to all email members of the precinct committee in early February with a request for contributions and corrections. It was discussed in detail at the Edward Precinct meeting on 10 February 2021.

Edward Precinct is situated west of the Pacific Highway adjacent to North Sydney city, between Lord St in the south and Hazelbank Rd in the north, It has around 750 residences whose occupants and owners are members of Edward Precinct.

Edward Precinct will be happy to discuss its objections to the road with TfNSW and/or DPIE if requested.

Extracts from the EIS are in blue, with page numbers provided.

The document is long, totalling 1417 pages plus appendixes which are reported to total 10,000 pages. It is detailed and deals reasonably comprehensively with environmental issues. The document is of high quality and obviously has taken its consultants much time to prepare. However, it is repetitive and over-long, making it time consuming to review.

Main Conclusions

Edward precinct objects to the EIS and the construction of the proposed Beaches Link and Gore Hill Freeway Connection unless substantial additional work is undertaken, in particular relating to comparison with other transport options and improvement to environmental management.

1. Despite its length, the EIS has little information on likely utilisation of the road, apart from the tables in Chapter 9. No explanation is evident on how these estimates were made.

2. There is no reported survey of origin and destination of car and bus users currently using the roads. This means that we have little idea of how these numbers will change in future. In our view such a survey should have been undertaken as part of the planning process for the road. It is recommended that an origin and destination survey is now conducted if one has not already been undertaken. The results must be published and provided to affected residents and businesses.

3. It is universally accepted that new road construction generates more traffic, with negative environmental effects and impacts on other local roads. In addition to the rail option discussed elsewhere, consideration should have been given to imposing a vehicle tax on vehicles entering the North Sydney and Sydney City business districts during peak hours at least, as introduced in London in 2003 and Jakarta. This would

greatly reduce peak hour traffic and congestion. There is no mention of the word tax in the document. The current problems being experienced near the M5 following toll imposition need to be taken into account.

4. The project is estimated to cost $14 billion. We strongly object to the fact that no financial or economic assessment has been undertaken of the project and require that these are completed and published before the project is approved. They should be compared to the performance of alternative transport modes.

5. The study was completed during the Covid pandemic year. This has had major impact on commuting and work locations, with substantial numbers of office workers still working from home. These changes are unlikely to be fully reversed once the pandemic ends with many employees and companies preferring online working, for perhaps three or four days each week. Study must be undertaken of how this is likely to affect peak hour vehicle, bus and train travel.

6. No study can be located of the potential for a light or heavy rail system to be constructed from North Sydney or Chatswood to the northern beaches. It is considered that a full feasibility study should have been prepared as part of the planning process for the Northern Beaches tollway. It is the view of most Edward Precinct members that rail is likely to be a far better option than tollway construction for most residents of the catchment area and in terms of reduced pollution and negative impact on North Sydney.

7. It is consequently strongly recommended that study of a rail alternative is conducted before approving the BL project. Initially, a prefeasibility should be prepared, and depending on its conclusions, expanded to full feasibility level to allow comparison with the road option. The financial and economic analysis of the rail alternative should be compared to the predicted performance of the Beaches Link.

8. It is noted that Social Impact Assessment is being expanded to all major projects in NSW, and a draft approach paper was published in late 2020. While it does not come into force until later in 2021, it is recommended that the Beaches Link project is subjected to detailed SIA, expanding the analysis included in the EIS.

9. Access to and from the Beaches Link and Western Harbour Tunnel will have a major and unacceptable impact on North Sydney. Access to the tunnels is in large part from Berry St in North Sydney which will be converted to four high priority lanes (with west to east traffic as at present). This will cut North Sydney in half making it a far less attractive and people-friendly urban environment. It will also preclude many of North Sydney Council's plans, for example making southern Miller St into a pedestrian area.

10. Overall, no positive features can be identified from a North Sydney perspective, apart from the few residents and businesses that will need to use the new tunnels. For other businesses and residents, the tunnel projects are financially negative, leading to the planned placement of tolls on the harbour bridge and existing tunnel heading north.

11. For these main reasons, Edward Precinct objects to the Beaches Link project and requires that more assessment work is undertaken before consideration is given to approving the project.

Part 1 Contents & Glossary

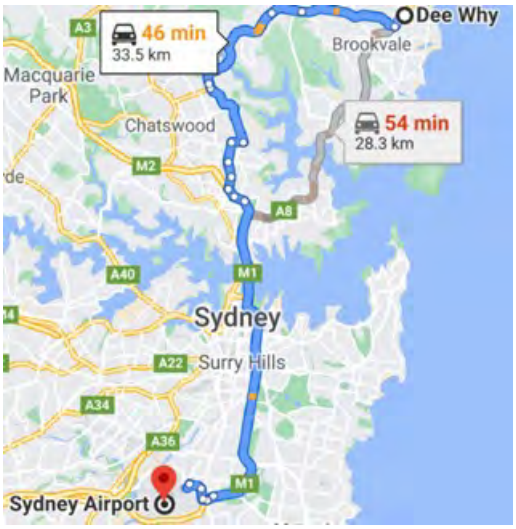
The 6 page table of contents and 10 page glossary give an indication of how complex the EIS is and how difficult for members of the community to review.

Executive Summary

"The population of Sydney is forecast to grow from five million to eight million people over the next 40 years." (p E-1)
Figure E-2 Key metrics for the Eastern Harbour City's transport network (p E-2)
Summarises the vehicles and bus passenger traffic per day. In our view, it would have been useful to convert these data to the number of people utilising the roads and bridges and compare the data to rail traffic.

"By reducing network congestion, the project would result in improved network resilience and reliability, particularly in peak periods, and would make bus routes to and from the Northern Beaches a more attractive transport option, supporting and encouraging a mode shift to public transport." (p E-3)
Long-term experience demonstrates that this is not necessarily the case, as new roads almost always attract more vehicles, slowing traffic on the freeways/tollways and more particularly on the roads that surround and link to them. Again, a comparison to improved railway development is needed.

"with the combined program of works, journeys from Dee Why to Sydney Kingsford Smith Airport are expected to be 56 minutes faster" (p E-5)



This only appears to relate to peak hour trips. A check on Google Maps indicates that at 3:00 PM on Tuesday 5 January, the time for the trip is estimated at 46 minutes so less than the total quoted time saving.

At 5:00 PM, the Google trip time would be 85 minutes making the suggested time saving indicated possible if speed averages 80 kph, but still optimistic. Since many people try to travel to the airport at non-peak times, the time saving estimate is highly inaccurate overall and needs to be reviewed.

"The program of works would also provide an opportunity to improve existing, and introduce new, bus services between key employment and education centres, directly and reliably linking the Northern Beaches to strategic centres including North Sydney, the Harbour CBD, St Leonards and Macquarie Park via the motorway network" (p E-5)
The potential to introduce additional rapid bus transport is a major benefit of the scheme.

Figure E-5 Key features of the Beaches Link component of the project (p E-9)
The road upgrade is mainly through non-residential areas. However, through North Balgowlah there appears to be a need for major surface works in residential areas. It is assumed that this is covered in detail in the relevant chapter.

Figure E-2 Overview of the temporary construction support sites
It is not clear why Figure E-2 is after E-5. This figure appears to have a greatly extended tunnel through North Balgowlah. This needs clarification.

Alternatives considered
"a number of strategic alternatives were considered for delivering the required road capacity at the crossing of Sydney Harbour……..

Given the high cost of constructing and operating rail infrastructure and the low density nature of the Northern Beaches, it is considered that demand would not be high enough to make investing in a specific or dedicated rail link to the Sydney CBD a viable alternative." (p E-14)

This will be analysed in detail in the relevant chapter, but it is considered that at least a pre-feasibility study on rail alternatives should have been undertaken and evaluated.

Planning approval process
"Transport for NSW will consider the comments and submit to the Department of Planning, Industry and Environment a submissions report that documents and responds to issues raised during the exhibition period." (p E-18)
It is noted that the many comments on the Western Harbour Tunnel EIS were not taken into account in the revised EIS. In total, 1500 comments were made of which almost all were negative. It seems that the Department of Transport NSW is incapable of taking comments and objections into account. Edward Precinct requests that the Department pays serious attention to all comments and criticisms made relating to Beaches Link.

Traffic and transport
"During operation of the project, potential localised impacts would include:

- Changes to access in and around North Sydney would streamline movements around North Sydney CBD but would adjust access for some residents and businesses in the area. Impacts would be minimised by ensuring all properties have reasonable alternative routes to maintain access
- Some instances of localised increases to bus travel times through the North Sydney CBD area." (p E-21)

The combined impact of BL and the WHT will be highly negative on North Sydney leading to (i) changed access to freeways, (ii) increased vehicle numbers and parking demand in side streets, such as Edward St (the backbone of Edward Precinct), and (iii) the likely decision to impose a new toll on the Harbour Bridge heading north. During construction there will be major negative impacts in Northbridge and North Balgowlah and at other suburbs where tunnel construction and waste removal activities occur.

It is noted that there is No Social Impact Statement on how adding additional or making access easier for vehicles into the centre of North Sydney and the City of Sydney CBD will impact the inner suburbs and city areas.

Air quality impacts during operation
"The ventilation system would be designed so that there would be no emissions from tunnel portals. All emissions would be via ventilation outlets." (p E-24)
No emissions cleaning is mentioned here. Probably none is planned. Edward Precinct considers that cleaning of tunnel releases is essential to avoid impact on residents near or downwind of the ventilation outlets. See Chapter 12.

Land use and property impacts (pE-29)
"Permanent land use changes would occur at:

- Cammeray Golf Course
- Artarmon Park and commercial properties
- Balgowlah Golf Course and residential properties along Dudley Street

- Bantry Bay Reservoir, Sydney Water site.

When completed, the project would deliver new and improved public open space and recreation facilities at Balgowlah and Bantry Bay Reservoir to improve urban amenity."

We object to this loss of open space in an area already severely deprived of open space and facing an increase in population. We already have one of the lowest areas of open space per capita in Australia and this situation will be worsened by the proposed tunnel construction.

Chapter 1 Introduction

1.2 The project

"Twin mainline tunnels about 5.6 kilometres long and each accommodating three lanes of traffic in each direction, together with entry and exit ramp tunnels to connections at the surface" (p 1-5)
The length of the main tunnel is relevant to its ventilation needs and processes, discussed in Chapter 12 below.

Chapter 2 Assessment process

No comment

Chapter 3 Strategic context and project need

"The North District is home to 886,550 residents (or 19 per cent of Greater Sydney's population), which is forecast to increase by 18 per cent by 2036.

The COVID-19 pandemic is an unprecedented event that has changed the way people work and their travel patterns, while creating some uncertainty about the future of the NSW economy…… [It is suggested that] that the movement of people, goods and services and demand for road capacity is returning to conditions similar to those prior to the COVID-19 pandemic." (p 3-2)

We disagree with this statement – since it is reported that work practices in business districts such as the cities of Sydney and North Sydney are likely to change significantly, with quite a high proportion of office workers working from home on some days with electronic connection to their offices. This may have substantial impact on peak period demand for car, bus and train travel. The EIS should have analysed this factor, and in our view it must be included in the final EIS.

"Sydney's worst road congestion occurs between Balgowlah and Sydney Harbour through Mosman and Cremorne (Grattan Institute, 2017).

The *Australian Infrastructure Audit 2015* (Infrastructure Australia, 2015), identified the east–west corridor (Warringah Road between Chatswood and Narraweena) as generating the third highest congestion cost of all road corridors across Sydney, Wollongong and Newcastle." (p 3-8)

It is certainly true that the roads are severely congested particularly at peak times, and that vehicles experience substantial delays – note the times indicated on page 3 for journeys from Dee Why to Sydney Kingsford Smith Airport. But delays outside peak hours are quite low unless Spit Bridge is up (4 times each weekday).

It is acknowledged that delays may increase as population increases. However, there are several key factors that the EIS appears to have insufficiently taken into account:

1. The fact that increasing numbers of cars will be electric and self-driving and potentially able to drive closer to the vehicle in front, increasing traffic density and speed.
2. Increasing number of working age people are expected to work from home permanently or for one or two days each week, as indicated by working patterns under the Covid pandemic.
3. The quite rapid aging of the Sydney population, meaning that an increasing proportion are able to travel outside peak hours limiting peak time vehicle use.

"journeys from Dee Why to Sydney Airport are expected to be 56 minutes faster (total travel time 39 minutes) in the AM peak by 2037 (via the proposed Beaches Link, Western Harbour Tunnel, WestConnex and Sydney Gateway)." (p 3-17)
This correctly says "peak" unlike the summary

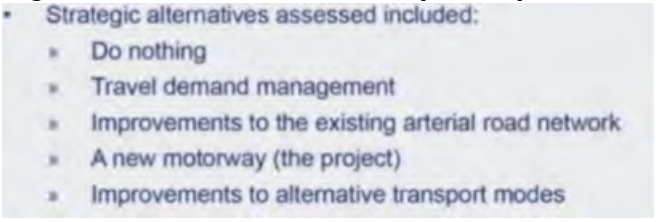
"The expected travel time savings for specific journeys in the AM peak are shown in Figure 3-8 which indicates shorter journey times when comparing the 2037 'with program of works' and 'without program of works' cases." (p 3-21)
All or at least most time savings developed in the EIS relate to peak hour travel. More analysis is thought to be needed relating to average 24-hour travel times.

"The potential benefits outlined above only account for the diversion of express bus services to the Beaches Link tunnel and motorway network and improved surface conditions along existing key routes, meaning it is a conservative estimate of the overall public transport benefits and opportunities delivered by the project. It is expected that the bus network could be re-optimised to take advantage of broader opportunities (including provision of new services) unlocked by the project. The project would enable these opportunities for new services to be developed in response to diverse travel demands and future development." (p 3-22)
This is not necessarily true. As previously mentioned, significant road upgrades or new roads rapidly attract more traffic, often causing increased delays in nearby roads and eliminating some of the benefits accruing to the road. However, the through bus routes described in Figure 3-10 should benefit substantially from the Beaches Link

"The NSW Government set out 18 State priorities to create a stronger, healthier and safer NSW (NSW Government, 2015). State priorities include improving road travel reliability, with a target of ensuring that 90 per cent of peak travel on key road routes is on time." (p 3-27)
This document has not been downloaded. However, improving on-time travel is not one of the Premier's 14 priorities – see https://iworkfor.nsw.gov.au/state-priorities

Chapter 4 Project development and alternatives

Figure 4-1 Alternatives development process



It is noted that while the figure mentions "improvements to alternative transport modes" it does not include addition of a new transport mode, ie, rail.

Figure 4-2 Historical development of additional cross-harbour capacity
The figure summarises the 25 decisions made since 1924 when Spit Bridge opened to increase capacity. Rail is not mentioned once.

Figure 4-3 Key public transport projects in the Greater Sydney area
Shows the Sydney Metro Northwest line, recently completed. Looking at the line from Castle Hill to Schofields, it would appear to be similar in length to a possible new line from North Sydney or Chatswood to Dee Why or further north. The population served by the line is not known but is likely to be similar to that potentially served by a new line serving the northern beaches. Cost of the northern beaches line would be higher due to higher tunnelling needs and topographic issues, but nonetheless, if the Northwest line is economic, it is likely that a beaches line would be, and certainly merits serious consideration.

The following Google map shows the road connection from Castle Hill to Schofields, with a length of around 14 km. North Sydney to Dee Why via Spit Bridge is 15 km. A tunnelled metro line would likely be less than 14 km.

Improvements to the Sydney bus network (p4-11)
The positive features of improved bus transport are listed.
"However, without measures to improve journey times by increasing the road efficiency or capacity, the addition of more buses to the network can contribute to congestion, making bus services less effective at meeting customer needs." (p 4-12)
This is true. However, in the long term (say >15 years) there will be changes in traffic that are likely to fully protect bus efficiency. In addition, expansion of the bus lane system to protect bus use at peak periods will likely be initiated.

"The *Northern Beaches Transport Action Plan* (Transport for NSW, 2016), outlined proposed rail initiatives of relevance to the project. These included a second harbour rail crossing as well as a new rail line to the Sydney CBD. Subsequently, this new rail line to the CBD was realised by the Sydney Metro City & Southwest project, which is a 30 kilometre extension of metro rail line from the end of the existing Sydney Metro Northwest terminus at Chatswood. The Sydney Metro City & Southwest project will travel from Chatswood, under Sydney Harbour, through newly established stations in the Sydney CBD through to Bankstown in the south west of the city. The Sydney Metro City & Southwest project will enhance the Sydney rail network and enable it to carry an additional 100,000 people per hour in peak periods, delivering sufficient capacity to serve the city well into the future." (p 4-13/14)

It is noted that there have been no detailed and published studies of the potential for rail to service the northern beaches. The EIS references listed in Chapter 29 do not mention any rail-related studies apart from the 2016 Northern Beaches Transport Action Plan discussed above.

Given the potential capacity of a new metro line to service numerous areas of NW and SW Sydney, it is disappointing that consideration was not given to a Beaches metro.

Edward precinct objects to the recommendation of the EIS to construct the Beaches Link and associated infrastructure without assessing alternative transport options, such as a metro link from North Sydney or Chatswood to Dee Why or further north. It is very likely that such a development would be far cheaper than the planned tollway and would carry more passengers and more effectively service employment in the business districts. It is noted that the proposed 55 storey office block at 110 Walker St North Sydney will house 5000 people but only has 170 car spaces (and 547 bicycle spaces). That means that about 4800 staff will have to commute by foot, bicycle, bus and rail. For Northern Beaches residents seeking to work in North Sydney metro rail would probably be the best option followed by buses.

Consideration of air filtration at the ventilation outlets

"The inclusion of filtration would result in no material change in air quality in the surrounding community when compared to the current project ventilation system and outlet design." (p 4-84)

We dispute this. It will be further discussed in the comments on Chapter 12.

4.5.8 Spoil transport alternatives

"Trucks would be limited to transporting relatively small volumes of spoil (about 25 to 30 tonnes per truck)" (p 4-88)

No information is given in this chapter of the number of truck trips per day on different roads and their impact on local residents and traffic. Such analysis should be in Chapter 6.

Chapter 5 Project description

"The project design presented in this environmental impact assessment would continue to be refined during further design development, and where relevant, respond to feedback from the community and other stakeholders during public display." (p 5-1)

It is noted that the 1459 submissions (including 1382 public submissions) relating to the Western Harbour Tunnel EIS were not responded to AT ALL in the resulting revised EIS. They were however reported in a 400-page report. This is actually a poor performance by the TfNSW and it is strongly hoped will not be repeated in relation to Beaches Link comments and criticisms.

However the NSW Government did publish a "Response to community submissions" report. In this there are frequent mentions of the linkage to the NW Metro line, but no mention of a metro or rail alternative to the WHT motorway project.

The Beaches Link project has obviously been well designed, though detailed analysis will be required by local residents in order to assess local traffic impacts. This analysis has not been undertaken by Edward Precinct.

5.1.3 Preparatory investigations and surveys

"The project does not include preliminary works, including surveys, test drilling, test excavations, geotechnical or contamination investigations or other tests, sampling or investigations carried out for the purposes of the reference design or assessment of the project." (p 5-7)

In the view of Edward Precinct, it is ridiculous that surveys were not undertaken, though we really mean origin and destination surveys, not ground condition surveys. Many surveys were carried out, some described in Chapter 7, including such aspects as a marine ecology survey and water quality testing (p 7-10) and archaeological surveys (p 7-14). Pedestrian and cyclist surveys are reported to have been undertaken. (p 8-12)

"Ongoing and continuous traffic surveys carried out by Transport for NSW indicate that the 2016 baseline year is appropriate for modelling purposes as there is little material difference between 2016 and existing (2020) traffic conditions in the project area." (p 9-7)

The EIS contains no description of the survey method or outputs, but it is expected that it is just a simple vehicle count, lacking origin and destination data.

"Multiple field surveys were carried out between May 2016 and April 2020"

These related to such aspects as "the condition of vegetation across accessible land within the construction footprint" (p 19-6)
Again, extremely detailed, further underlining the weakness of the report in relation to specific traveller activities and demand.

Emergency Egress routes are extremely long/excessive

Fires in tunnels in Europe have shown the dangers involved in long egress routes and limited access into the emergency egress route (quite often).

Chapter 6 Construction work

Appears detailed and comprehensive. The only part we would object to relates to the dredging activities prior to tunnel placement across Middle Harbour.

Table 6-2 Overview of construction works
Cofferdam construction and dredging activities in preparation for the installation of immersed tube tunnels (crossing of Middle Harbour) (p6-4)

Harbour sludge to be dug up for the new tunnel will contain toxins as reported in the Sydney Morning Herald on 13 February - https://www.smh.com.au/national/nsw/harbour-sludge-to-be-dug-up-for-new-tunnel-contains-alarming-levels-of-toxins-20210212-p5721z.html?btis

While the article relates to Berrys Bay and the Western Harbour Tunnel, similar if somewhat lower levels of pollution are likely from the Middle Harbour crossing.

Chapter 7 Stakeholder and community engagement

Figure 7-1 Beaches Link and Gore Hill Freeway Connection project community and stakeholder engagement process (p 7-4)

It is noted that following the closure of submissions, there will be a response in August 2021, with a planning determination in November 2021. It is further noted that the WHT response took almost no account of the 1500 submissions that were lodged of which almost all were negative. It is requested that the Department takes far more account of the submissions made relating to Beaches Link, both negative and positive.

7.1.3 Stakeholders

Community and interest groups (p 7-18)

Three precinct committees were consulted – Waverton, Plateau and Wollstonecraft. It is in the view of Edward Precinct, unfortunate that more precincts were not consulted, particularly those directly affected by the project.

Edward precinct will be indirectly affected, through increased traffic density, road access and parking problems in North Sydney.

The following tables relate to stakeholder and community engagement relating to the design of the Beaches Link project.

Table 7-7 Summary of stakeholder and community feedback (p7-20)

Feedback topic	Number of comments 2017	Number of comments 2018	Environmental impact statement reference
Transport mode, public transport alternatives, network integration, connectivity, integration with other key projects and proposed infrastructure (eg Northern Beaches B-Line, Sydney Metro)	547	1974	Chapter 3 (Strategic context and project need) Chapter 4 (Project development and alternatives) Chapter 5 (Project description) Chapter 8 (Construction traffic and transport), Chapter 9 (Operational traffic and transport) and Appendix F (Technical working paper: Traffic and transport)
Potential impact on local streets, rat runs, local road safety, construction traffic, impact on parking spaces, congestion, road network performance, local road connections, increased traffic, cumulative traffic impact, travel time	398	4023	Chapter 8 (Construction traffic and transport), Chapter 9 (Operational traffic and transport) and Appendix F (Technical working paper: Traffic and transport) Chapter 27 (Cumulative impacts)

It is anticipated that most of the “Potential impact on local streets” etc would have been negative, but information on this is not provided.

It is noted that “Transport mode” includes feedback on Sydney Metro. It is unfortunate that this has not been covered in more detail.

Table 7-8 Issues raised by the community (p 7-24)

Project development and alternatives	Further investigations into other transport mode options should have been carried out prior to choosing a road option.	An overview of the strategic context and project need are provided in Chapter 3 (Strategic context and project need). An overview of the development process and options considered are provided in Chapter 4 (Project development and alternatives).
	Preference for public transport over motorways Project should be replaced by a metro or heavy rail Consideration should be given to a dual rail/road .	The project (as part of the broader Western Harbour Tunnel and Beaches Link program of works) has been planned as part of an integrated transport network to meet the diverse travel and transport needs of Sydney. This includes a well-developed road, rail, bus, ferry, walking and cycling network. An overview of the strategic context and project need are provided in Chapter 3 (Strategic context and project need). The project has been designed to provide high quality access for express bus services expected to travel via the proposed Beaches Link tunnels in the future – providing a significant improvement in public transport travel times and reliability. The project has also been designed to provide significant improvement in existing public transport route travel times by reducing congestion on existing arterial roads.

In the view of Edward Precinct, these are serious concerns that were addressed quite inadequately in the EIS.

We strongly recommend that consideration should be given to a metro or heavy rail alternative.

Air quality issues were also raised by the community and are listed in the Table on page 7-29. Edward Precinct is of the view that both tunnel vents should be filtered. It is also our view that the 5.6 km tunnel is too great a length for a two-stack ventilation system.

The comments on operational traffic on page 7-31 are also highly relevant and extend to North Sydney.

Chapter 8 Construction traffic and transport

Not very relevant to North Sydney CBD or Edward Precinct. Though Western Harbour Tunnel construction will have a major impact on Bay Rd.

Tables 8-15 to 8-18 summarise the expected impact of construction traffic on a number of roads and junctions in four areas during morning and evening peak hours. The tables suggest that the construction traffic will have little impact on almost all roads. Falcon St west of Merlin St moves from Level of Service E to level F during construction.

D Operating near capacity	Close to limit of stable flow and approaching unstable flow.
E Unsatisfactory.	At capacity.
F Unsatisfactory.	Extra capacity required.

Two roads in other areas move from D to E or E to F but out of the 23 roads assessed only 4 were expected to worsen sufficiently to change class during either morning or evening peak. However, local area residents near the removal areas may face significant impacts from truck movements.

Chapter 9 Operational traffic and transport

Road network performance

"Although the project would generally improve network performance for roads within and around North Sydney, it would not resolve existing localised performance issues at several intersections. The proposed road integration works and resulting improved traffic performance in the North Sydney area have been developed in the context of the growing North Sydney CBD environment." (p 9-18)

We do not see any likely improvement in local traffic anywhere in North Sydney. In fact we consider that the ability of more cars and buses to access the CBD from the north will worsen traffic conditions at both peak and non-peak times. However, offsetting this will be the reduction in commuters likely to work in the CBD following the increase in e-working from home. In fact this change in working approach undermines the whole concept of the Beaches Link.

Table 9-6 Modelled intersection performance on the Warringah Freeway and surrounds area (AM peak (8am–9am) and PM peak (5pm–6pm) during operation in 2027 and 2037) (p 9-19)

This very large table appears to show that there are few benefits from Beaches Link in relation to local traffic in the streets surrounding the BL, and many negatives. This would be

expected as a road such as this almost always worsens surrounding traffic by attracting more cars and other vehicles to use the road.

It is noted that most cities in the world now reject motorways as a solution to within-city travel, and some are even removing motorways previously constructed. Such cities include San Francisco and Helsinki.

Figure 9-5 Access arrangements upon completion of construction works at the Warringah Freeway (p 9-24)

The Berry St access to the Warringah Freeway and Arthur St south seems better than proposed for the WHT.

Impact on the North Sydney CBD

Existing motorways have already had a highly negative impact on the North Sydney CBD, strongly limiting its growth to the east, its access from the east, the destruction of buildings, loss of parkland and separation from Neutral Bay and Kirribilli.

The new tunnels will have an almost equally significant impact through seriously splitting the North Sydney CBD in half due to the huge increase in traffic predicted for Berry St, and proposed widening of its traffic lanes and elimination of parking. This will limit the potential for North Sydney to develop into a social and pleasant suburb. In particular, the creation of the proposed Miller St pedestrian area will be totally impossible. Edward precinct objects strongly to the negative impacts that the roads will have on the North Sydney social and physical environment.

Impact on local roads in the Northern Beaches area

It is well known that new motorways often (almost always) generate more traffic on surrounding roads, as vehicle operators travel to or from motorway access points. This has been a major reason for cancellation of planned motorway construction in many overseas cities and the closure of some motorways.

This implies that traffic benefits will be short-lived and that congestion would return to current levels within maybe 10 years. A metro line on the other hand would significantly reduce the growth in vehicle demand on local roads.

Apparent total lack of origin and destination surveys

Edward Precinct strongly objects to the apparent total absence in the EIS of vehicle counts on existing roads or of origin and destination surveys. While substantial traffic modelling has been undertaken (see for example Table 4-1 in Appendix F) no actual vehicle counts have been located in the EIS including appendixes. A search for the word “origin” in the main report located nothing of relevance. It is possible that a traffic study was undertaken in 2016, but no reference to it is made in the EIS.

Edward precinct recommends that detailed traffic counts and origin and destination surveys are undertaken before the road is approved, and the results applied to sensible economic analysis.

The next two chapters are not relevant to Edward Precinct and no comments are made.

Chapter 10 Construction noise and vibration

Chapter 11 Operational noise and vibration

Chapter 12 Air quality

There is no difference in approach with the tunnels involved to those proposed and approved (despite community well-founded protest) for the WHT.

The so called best practice with regard to tunnel ventilation is in fact worst practice dressed up as best, based on the lie that that all tunnels ventilation systems are designed without expelled air cleaning systems.

There is no allowance for ventilation discharge stacks to be cleaned (or scrubbed in engineering parlance).

So all air sucked into the tunnels – with embedded pollution – is then mixed with the vehicle pollution generated in the tunnels and expelled direct into the atmosphere in residential areas as concentrated, polluted air. This is a concentration of pollution by any standard.

No peer reviewed modelling is provided to show that this concentrated pollution is dispersed by the natural wind or air currents. In fact, no modelling is provided at all, just statements.

The additional cost of cleaning the expelled, polluted air would be miniscule compared to the civil costs of the tunnels.

The operating costs of the polluted air cleaning systems are small compared to the overall operating costs of these tunnels.

Vehicle pollution figures appear to be the 'sticker' values from vehicles when tested for ADR.

There is no evidence that these figures are true to vehicles over their life span, but lots of anecdotal evidence (such as driving on Sydney's roads), that many larger vehicles are producing greater pollution than they are supposed to, and even more so where start/stop driving is involved.

There is no allowance in the pollution figures provided to take into account the particulate matter generated by the vehicles tyres, braking and transmission systems.

The tunnels have very long inclines and declines, with braking generating particulate matter from all vehicles on declines, and on the inclines, additional exhaust pollution from all vehicles -but particularly heavier vehicles - working harder to climb the inclines.

Where continual stop/start traffic occurs, this pollution increases.

One trip in either direction in the M5 tunnels shows the pollution 'fog' in both the east and west heading tunnels. It is visible as a blue/grey haze. Some motorcyclists refuse to use these tunnels due to the smell and taste of the pollution and the fact even though relatively short, pollution is deposited on both rider and bike. This same blue/grey fog is expelled directly into the atmosphere.

The Beaches Link tunnel ventilation system will be designed with a longitudinal ventilation system, with air drawn in the entry portals by moving traffic. This is the most commonly used ventilation design around the world. However in the view of Edward Precinct, consideration should have been given to the construction of a transverse ventilation system, which is far better suited to a long-distance, heavy traffic tunnel, as it involves the delivery of fresh air into the tunnel at multiple points along its distance.

"Air quality impacts during tunnelling and surface works would typically include dust and the effects of airborne particles on human health and amenity as well as potential odour emissions during handling and management of harbour sediment" (pE-23).

Experience in relation to other tunnel construction (eg, Northconnex) indicates that dust management during construction is a significant problem for residents in the area.

Chapter 13 Human health

"Road tolling
The implementation of road tolls can have direct impacts on the management of congestion, which has an impact on economic productivity, and social elements such as stress, time with family and friends, cost and environmental amenity such as reduced traffic emissions.

One impact is the potential to increase congestion volumes on surrounding roads as a result of toll avoidance. The use of a toll road can also increase the cost of living and can exacerbate social inequality." (p 13-27)"

We do not agree that a toll road will reduce traffic emissions. It will attract increased vehicle use and thus likely increase emissions, at least until electric cars and buses become common when emissions should fall. Increasing congestion on surrounding roads is a serious issue. It is strongly recommended that a "Lane Cove Tunnel" solution is not attempted, cutting the lanes on competing roads to attempt to enforce tunnel usage.

"In July 2018, the NSW Government implemented a toll relief initiative to ease the cost of living for frequent NSW toll road users through the provision of free vehicle registration. This was expanded in July 2019 to also provide half-priced vehicle registration for eligible road users." (p 13-27)
Edward Precinct is opposed to such subsidies, since they increase the taxes that we have to pay to support the government.

It is noted that in London, the death of a 13-year-old girl in 2013 was reported in December 2020 to have been caused largely by air pollution due to traffic on the South Circular road.
https://www.smh.com.au/world/europe/in-legal-first-coroner-finds-ella-s-death-was-caused-by-air-pollution-20201217-p56o5y.html
This supports Edward Precinct's objection to the lack of air filtration on the ventilation stacks of the proposed Beaches Link.

No comments are made on Chapters 14 to 19.

Chapter 14 Non-Aboriginal heritage
Chapter 15 Aboriginal cultural heritage
Chapter 16 Geology, soils and groundwater
Chapter 17 Hydrodynamics and water quality
Chapter 18 Flooding

Chapter 19 Biodiversity
Chapter 20 Land use and property

Table 20-4 Anticipated residual land created by the project (p10=25)

"Part of Cammeray Golf Course would be occupied by temporary construction support sites and permanent operational infrastructure for the Western Harbour Tunnel and Beaches Link program of works. The land required for the project would be acquired and/or leased as part of the Warringah Freeway Upgrade component of the Western Harbour Tunnel and Warringah Freeway Upgrade project. Works to restore the golf course would be completed as part of the project."

No statement of the temporary and permanent loss of space on the golf course has been located during our review. We have searched the entire main report and have not found it. Although it may be located in an appendix, we object to this omission of the data that we need to fully assess the impact of the project.

The Precinct is very concerned about the loss of open space at Cammeray Golf course. In combination with other open space impacted by the BL and WHT, 3 km^2 of open space will be lost in North Sydney. With significant development and population growth occurring in the NSLGA, we need more open space not less. The State government should provide additional open space to offset this significant loss.

Chapter 21 Socio-economics

Table 21-1 Secretary's environmental assessment requirements – Socio-economic (p 21-1)

The table is quite comprehensive, but fails to mention the need to consider alternatives and changes that are likely to occur during the life of the project (say 50 years)

As discussed in our response to Chapter 4, we are concerned that insufficient attention has been given by project planners to the potential for a metro or heavy rail line serving the Northern Beaches. This could run from North Sydney or Chatswood to Dee Why or Mona Vale with a possible branch line to Manly. This point was made in earlier community responses, but was not addressed by the project planners.

A search for the words metro and rail in the entire EIS, only found one relevant paragraph, included in our discussion of Chapter 4 which mentioned the *Northern Beaches Transport Action Plan* (Transport for NSW, 2016). However, this only mentions "Manly/Mosman - Deliver a second harbour rail crossing and investigate a rapid transit link from Neutral Bay to the second harbour rail crossing".

Edward Precinct's view is that at least a prefeasibility study and maybe a full feasibility study should have been undertaken of rail alternatives. In our view, such a study should be undertaken before approving the Beaches Link.

The study should include:

1. The optimal origin of the line in either North Sydney or Chatswood. In our view North Sydney is the optimal terminus, as Chatswood is too far to the west.
2. Analysis of metro compared to heavy rail, with metro the likely winner.
3. Analysis of the potential for Beaches trains to join the existing metro line and travel to the city.
4. The optimal passage of the line and suburbs to be serviced.
5. The northern extent of the line to Mona Vale, Narrabeen or Dee Why. It is likely that the far northern suburbs would be better serviced by buses connecting to the northernmost train station.
6. The extent to which Mosman and Manly can be serviced.?
7. Analysis of the need for tunnels compared to surface lines.

It is recognised that topography in some areas may be an issue,

Appendix U Socio-economic assessment examines the impact of the project on local business, but states
"Important note - This document considers impacts on local businesses along the Beaches Link and Gore Hill Freeway Connection project corridor. The findings should not be conflated with the economic appraisal of the Western Harbour Tunnel Beaches Link program of works, which considers the wider economic impact of the program to the state of New South Wales." (p viii)

While Chapter 21 is called "socio-economics" there is no economic analysis anywhere in the report that we have been able to locate. We strongly object to multi-billions of our tax being used to fund a project whose economics are totally unknown. If economic analysis has been completed, it must be published and provided to all interested parties.

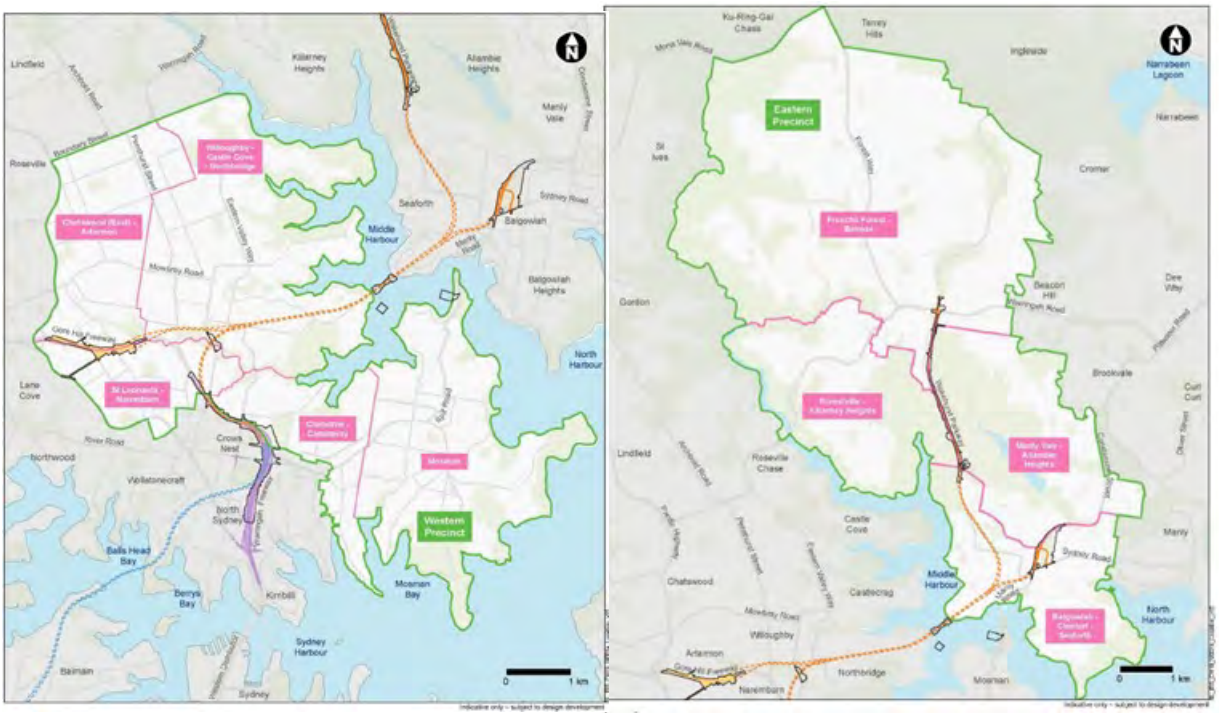
21.2.2 Business surveys and 21.2.3 Stakeholder consultation

While quite extensive surveys seem to have been undertaken, no information has yet been seen in relation to the current and possible future demand for the BL. In our view, detailed surveys needed to be undertaken of vehicle and bus occupants to define origin and intermediate and final destinations and the purpose of travel.

Figure 21-1 Western Precinct (p 21-4)
The figure demarcates the precinct as occupying suburbs from Chatswood/Willoughby to Mosman, with a population estimated at 123,000 (Table 21-3). In our view, the proposed road is almost irrelevant to these suburbs, since the only times most residents would use the road would be for trips to the beach or occasionally on business.

Figure 21-2 Eastern Precinct (p 21-5)
The EIS assumes that the Eastern Precinct includes Frenchs Forest, Belrose, Forestville, Killarney Heights, Manly Vale, Balgowlah, Clontarf and Seaforth with a population estimated at 80,000 in 2019 (Table 21-3). It is not clear why the precinct includes Frenchs Forest, much of which is far removed from the Wakehurst Parkway upgrade. None of the northern beaches suburbs are included in the precinct (see the map below).

Based on these figures, the road appears not to be designed to service the northern beaches and residents from Manly to Brookvale to Dee Why to Mona Vale will not benefit significantly from this road.



21.4.6 Economics (p 21-37)

This section talks only about construction employment and has nothing to do with economics. In fact the likely economic performance of the road must be assessed prior to approval being given to proceed in the view of Edward Precinct.

Several factors are relevant. Firstly the cost of the project may prove to be greatly underestimated, as has happened with a number of new Sydney motorways. Secondly the utilisation of the road may be far less than expected, making it non-viable for the operating company. This has happened with several motorways in Sydney, notably the cross-city tunnel and the Lane Cove tunnel. The operators of both of these roads collapsed financially.

Connector Motorways was supposed to operate the Lane Cove tunnel concession until 2037. However, the project was a disaster for the company, which went into receivership in January 2010 after a string of losses. It was bought by a new operator in May 2010 for $630 million compared to the construction cost of $1 billion. The Lane Cove tunnel is interesting in that the government cut the number of lanes on the pre-existing road (Epping Rd) from 3 to 1 in some sections to try to make traffic use and pay for the tunnel. This may have worked at peak hours but for most of the day, the tunnel is barely used. It is viewed as a major negative by many users.

In 2013, more than two years after it was placed in receivership, Brisbane's Clem7 tunnel was sold to Queensland Motorways for $618 million – a fraction of the $3 billion it cost to build. The Brisbane tunnel failed to attract anywhere near the number of motorists that were forecast. That was despite the tunnel operator using almost every means possible to attract motorists, including slashing tolls.

21.5.5 Economic (p 21-49)

Again there is no estimate of economic impact in this section, purely a description of a few general impacts. It is considered to be quite inadequate.

21.6 Environmental management measures (p 21-55)

It is not clear why this section is here. It has almost nothing to do with socio-economic impacts or performance.

Chapter 22 Urban design and visual amenity

22.7 Assessment of potential operational impacts (p 22-43)

This deals with landscape character impacts and not with the far more important traffic and social impacts.

Chapter 23 Hazards and risks

Chapter 24 Resource use and waste management

24.3.3 Spoil generation and management

About three million cubic metres of spoil would be produced from land-based construction activities (terrestrial spoil) during construction (p24-9)

Removal of this waste will have substantial impact on local residents adding many truck movements through suburbs, with estimates of truck movements in Chapter 8. While the main road impact is not great, there will be impacts on local roads and residents near the waste removal sites. While not sufficient to block traffic, the road use may have a substantial impact on local residents due particularly to noise and maybe dust. These impacts need to be fully defined in the EIS.

As previously mentioned, dust generation during construction is expected to be a significant issue for residents near to the construction zone.

Based on around 30 tonnes per truck, the 3 million m^3 of waste will require around 200,000 truck in and out movements, with severe impact on many roads and suburbs.

Chapter 25 Sustainability

Chapter 26 Climate change and greenhouse gas

Table 26-2 Summary of climate change projections – Sydney region

The figures in this table based on the 2013 Intergovernmental Panel on Climate Change's Fifth Assessment Report are extremely concerning, with an expected 4 degree increase in mean minimum and mean maximum temperatures and a decrease in annual rainfall by 200 mm. If realised, these changes would be disastrous for the world. While many factors control climate change, increased vehicle emissions are a significant factor, and suggest that, at least for the next 20 or 30 years, the new roads will be negative through increasing vehicle numbers and speed. However as mentioned previously most cars and buses will likely be electric by 2050 and thus the roads should not have a negative impact after 2040 or 2050. However, it would be valuable if the EIS could discuss such matters.

Chapter 27 Cumulative impacts

27.3 Assessment of potential cumulative construction impacts
27.3.1 North Sydney and Cammeray (p27-10)

Once again there are unfortunately no estimates of the impacts on different areas of North Sydney from changes to vehicle numbers arising from the proposed project. Mention is made of some impacts – for example in Cammeray, but nothing is quantified.

Chapter 28 Synthesis of the environmental impact statement

Chapter 29 References

References were searched for the words “train” and “rail” but no reference appears to contain analysis of either topic based on their titles.

Conclusion

Edward Precinct objects to the Beaches Link project on the following grounds:

1. Negative impacts on North Sydney traffic.
2. Negative impacts on the social environment in North Sydney.
3. Separation of the northern and southern North Sydney CBD due to high multi-lane traffic flows on Berry St.
4. Lack of assessment of alternative transport modes.
5. Lack of mention of global trends in city motorways, with almost all cities rejecting them and some replacing existing motorways with improved public transport.
6. Lack of financial and economic analysis.
7. Widely spaced and unfiltered exhaust stacks.
8. Increased air pollution in the tunnels and near the stacks, at least until electric vehicles predominate.
9. Lack of evaluation of how vehicle electrification will affect road capacity and thus the need for the Beaches Link.
10. Lack of assessment of changing work practices including e-working for several days each week by many office staff, reducing demand for office space and commuting.

Provided that BL is the most economic alternative compared to all transport modes, it meets NSW economic performance targets and is financially viable, Edward Precinct will not object to construction. However, negative traffic and pollution impacts on North Sydney would need to be assessed in detail and minimised.