

Mary Gibbs - LCT - Surface Traffic Modifications

From: RICHARDS Caitlin <Caitlin_RICHARDS@rta.nsw.gov.au>
To: Lisa Mitchell <Lisa.Mitchell@planning.nsw.gov.au>, Vicky Sheppard
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 <Jacinta.deJong@environment.nsw.gov.au>, Mattes Andrew
 <Andrew.Mattes@environment.nsw.gov.au>, Mary Gibbs
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Date: 10/01/2007 10:50
Subject: LCT - Surface Traffic Modifications
CC: FAULKNER Steve <Steve_FAULKNER@rta.nsw.gov.au>, ANDERSON John Raymond
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Dear All,

The RTA notes that in its agency briefing, the Department of Health indicated that it did not consider that one year of monitoring at the two elevated air quality monitoring stations after Tunnel opening was sufficient and that this period should be extended by five months, in line with the proposed delay in full Project implementation.

The RTA therefore provides the following additional information for the consideration of the DoH, DoP and DEC:

- Memo detailing the reasons why the RTA considers that extension of the monitoring timeframe for two elevated stations is not necessary;
- Dr Ross's Air Modelling Impact Assessment: Design Phase (CAMM Report No. 12/04); and
- Two addendum Reports (CAMM Report Nos. 1/06, 11/06 - to be forwarded in separate emails shortly).

If considered necessary, we would be happy to host a meeting to discuss this issue at our offices on Friday morning.

If you have any queries please do not hesitate to contact me.

Cheers

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Surface Traffic Transition Strategy – Operational Air Quality Additional Information

The RTA notes that in its agency briefing, the Department of Health indicated that it did not consider that the one year of monitoring at the two elevated air quality stations after Tunnel opening was sufficient and that this period should be extended by 5 months, in line with the proposed delay in full Project implementation.

The Minister for Planning's Conditions of Approval require that six ambient air quality monitoring stations are operated as follows:

- ◆ Two Community Based Monitoring Stations (CBMS) to be independently operated for at least three years after tunnel opening;
- ◆ Two Ground Based Monitoring Stations (GBMS) to be operated for at least three years after tunnel opening; and,
- ◆ Two elevated (building mounted) monitoring stations located on adjacent buildings specified in the Conditions to be operated for one year after tunnel opening.

This monitoring program using six monitoring stations is the most comprehensive of any infrastructure project in NSW, and indeed any known infrastructure project. By comparison, the Department of Environment and Conservation maintain approximately 20 stations to monitor the regional air quality of NSW as a whole.

In requiring a shorter monitoring duration at the two elevated stations, and allowing these stations to be decommissioned at the end of the one year period, the Minister for Planning acknowledged that the two CBMS and two GBMS constitute a comprehensive monitoring network for compliance purposes.

In respect of the elevated monitoring stations, it is important to note that under the Approved Project, the monitoring duration of one year would include six months during which the Epping Road works would have been under construction. It is also important to note that the two elevated stations are located in close proximity to the ventilation stacks and not in the vicinity of the subject surface works and, therefore, that the impacts of construction air quality would not be discernable at these locations. Separate construction stage dust monitoring will continue to be undertaken in addition to the operational ambient monitoring for the duration of construction. Accordingly, the extended construction duration under the Proposed Modifications would not impact on the data recorded at the six ambient stations during the first year after Tunnel opening.

The nominated one year of operational monitoring data to be collected from the two elevated stations will ensure that the seasonal variations are taken into account in accordance with Department of Environment and Conservation's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC, 2005).

It is also noted that, consistent with the requirements of the Cross City Tunnel Approval, Condition 164 requires that these stations are located at the air conditioning intake nearest the top of the subject buildings in order to gauge the quality of the air likely to be drawn into these two buildings. However, unlike the Cross City Tunnel, it is noted that the inclusion of this monitoring in the Conditions of Approval for the Lane Cove Tunnel is based on public perception rather than actual air quality impacts (see Director-General's Report, dated November 2002, page 67). The EIS and additional air quality modelling completed for the Lane Cove Tunnel prior to project Approval clearly demonstrated a local improvement in air quality and did not indicate any additional impacts for elevated receptors.

The additional dispersion modelling completed by Graeme Ross of CAMM (see attached CAMM Report Nos. 12/04, 1/06 and 11/06) as part of the detailed ventilation design development also confirmed these findings. This modelling indicates that the predicted incremental impacts resulting from emissions to air from the two ventilation stacks, including impacts in very close proximity to the stack and at all elevated receptors, will be infra-marginal. This means that the predicted magnitudes of these increments are so small that they are significantly less than the normal variations (hour to hour, day to day, year to year etc.) in the monitoring data for each pollutant and will not be discernable from background air quality. For example, modelling undertaken for the year 2006 (the worst case year) indicates a predicted maximum 24 hr average PM_{10} ground level concentration of $3.73 \mu\text{g}/\text{m}^3$ from the ventilation stacks for the simulation period using conservative inputs including the meteorological data for the full year from 1 December 2000 to 30 November 2001. This concentration represents a small fraction of the background air quality or the $50 \mu\text{g}/\text{m}^3$ 24 hr average ambient goal specified in Condition of Approval No. 169. Modelling was also undertaken, using the same data set, for abnormal traffic conditions (with the mid-tunnel exhaust points operating) indicates a predicted maximum 24 hour average PM_{10} ground level concentration of $0.62 \mu\text{g}/\text{m}^3$. Dr Ross has concluded that it is highly unlikely that a comparison of monitoring data collected before and after the opening of the Tunnel will detect these increments. Dr Peter Manins, CSIRO, was engaged on behalf of the Air Quality Community Consultative Committee to independently review Dr Ross's modelling work. Dr Manins also concluded that the air emissions from the ventilation stacks would not be discernable from the background.

It should also be noted that air emissions from the M5 East and Cross City Tunnel ventilation stacks cannot be discerned from ambient air quality monitoring completed to date on these projects. The background air quality data collected from the six monitoring stations installed as part of the Lane Cove Tunnel Project to date correlate closely, indicating that the pollutant readings at these stations are strongly controlled by regional air quality rather than local effects.

The data collected from the ambient monitoring stations both before and after Tunnel opening will be used to assess compliance with Conditions of Approval Nos. 168, 170 and 173. The RTA notes that, in accordance with the Proposed Modifications, it is proposed to delay the completion of the validation work required by Condition 168 by five months in line with the proposed delay to full implementation of the Project. The RTA notes that the one year of data from the elevated stations and the data from the GBMS and CBMS will be more than sufficient to undertake the required validation and assessment work and will be well in excess of that which has been utilised to complete similar work on other projects.

It should also be noted that the leases for these elevated stations are limited to one year after Tunnel opening and any extension of monitoring would need to be negotiated with the property owners and cannot be guaranteed. The cost of extending the monitoring at the two elevated monitoring stations is estimated to be in the order of \$500, 000 (including extending lease arrangements (if possible), the continued operation of the stations and data validation, reporting and auditing).

Importantly, ambient air quality is predicted to improve following tunnel opening as traffic begins to utilise the Tunnel.

For these reasons, the RTA considers that the data from the two CBMS and two GBMS will be sufficient to gauge the impacts of the project as proposed to be modified and, as such, that there is no tangible benefit to be gained from extending the monitoring timeframe at the two elevated monitoring stations.

Mary Gibbs - RE: LCT proposed modification - questions

From: RICHARDS Caitlin <Caitlin_RICHARDS@rta.nsw.gov.au>
To: Mary Gibbs <Mary.Gibbs@planning.nsw.gov.au>
Date: 10/01/2007 16:32
Subject: RE: LCT proposed modification - questions
CC: ANDERSON John Raymond <John_Raymond_ANDERSON@rta.nsw.gov.au>, HUMPHREY Garry R <Garry_HUMPHREY@rta.nsw.gov.au>, RAMIREZ Giovanny <Giovanny_RAMIREZ@rta.nsw.gov.au>, ISSA Steven C <Steven_ISSA@rta.nsw.gov.au>, ANDREW Mark S <mark_andrew@rta.nsw.gov.au>, Lisa Mitchell <Lisa.Mitchell@planning.nsw.gov.au>

Dear Mary,

The RTA's response to your questions is given in the attached Table.

If you have any queries please do not hesitate to call me.

Cheers

Caitlin Richards
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From: Mary Gibbs [mailto:Mary.Gibbs@planning.nsw.gov.au]
Sent: Monday, 8 January 2007 17:49 PM
To: RICHARDS Caitlin
Subject: Fwd: LCT proposed modification - questions

Caitlin, could I add one more question to this list for the time being (number as you like).

- Could you clarify whether the bus bay at Military Road was ever intended to operate as a bus stop, or simply as a pull-over spot for buses? If it was intended to operate as a bus stop, would its removal be likely to have any significant impact on the local accessibility to buses?

Thanks,

Mary

Mary Gibbs
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>>> Mary Gibbs 08/01/2007 16:24 >>>
Caitlin,

Could the RTA please provide further information regarding the following:

1. When discussing the timing of the opening of the Tunnel, Falcon Street Ramps and Gore Hill Freeway widening, what is meant by the statement that these elements may be 'better integrated' into the road network if opened progressively? Does this mean that congestion is likely to be reduced? Are there other likely benefits?
2. With regard to the proposed modification for the pedestrian crossing of Epping Road at Mowbray Road West, is the forecast impact on bus priority still thought to be an issue? Is there any data available on the extent of the delays to traffic likely to result from the project if an uninterrupted crossing were installed?
3. Also with regard to the pedestrian crossing, how would it operate if pedestrians were attempting to cross from both sides at once? What is the longest time a pedestrian is likely to be detained in the median? What safety measures would be in place?
5. Are there any safety issues for pedestrians and cyclists arising from the delay in construction of Stage 2 works? Would these be managed under the Traffic Management Plan?
6. What are the impacts on business from the delayed works likely to be?

Regards,

Mary

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Lane Cove Tunnel

Surface Traffic Transition Strategy

Questions from the Department of Planning (forwarded via email 8/1/07)

No	Question	RTA Response
1	When discussing the timing of the opening of the Tunnel, Falcon Street Ramps and Gore Hill Freeway widening, what is meant by the statement that these elements may be 'better integrated' into the road network if opened progressively? Does this mean that congestion is likely to be reduced? Are there other likely benefits?	The current draft opening Traffic Management Plan proposes a staged opening of the Project to traffic, with the Falcon Street ramps and eastbound widened Gore Hill Freeway proposed to be opened prior to the Tunnel. Opening of the westbound Gore Hill Freeway would occur concurrently with Tunnel opening. This strategy is currently being considered by the RTA in accordance with Condition 30. It should be noted that the RTA will need to consider the benefits of a staged opening in the context of the likely Tunnel opening date and the levels of traffic utilising the network at that time. It is noted that a staged opening strategy may help better familiarise motorists and other road users with the different elements of the Project and reduce the potential for confusion immediately following the opening of Project elements. A staged opening may also facilitate more detailed monitoring of the immediate performance of Project elements and would allow the RTA to better manage any issues (including possible resultant congestion) on the road network.
2	With regard to the proposed modification for the pedestrian crossing of Epping Road at Mowbray Road West, is the forecast impact on bus priority still thought to be an issue? Is there any data available on the extent of the delays to traffic likely to result from the project if an uninterrupted crossing	The provision of a single uninterrupted pedestrian crossing of Epping Road at Mowbray Road west would result in severe congestion on Epping Road which would impact on all road users, including buses. As noted in the RTA's Environmental Assessment Report in Section 6.2, a single uninterrupted pedestrian crossing of Epping Road would require at least a 43 second duration (assuming a pedestrian speed of 1.2 m/second). While the exact queue lengths have not been modelled, the RTA estimates that during high pedestrian usage, traffic may queue along Epping Road passing Sam Johnson Way (westbound) and passing Pittwater Road (eastbound). The RTA reiterates that the additional 18 seconds required to facilitate a single uninterrupted pedestrian crossing at this point would result in an unacceptable level of service at this

	were installed?	intersection. The RTA concludes that the proposal to stage the subject pedestrian crossing would provide an appropriate balance for all road users, including buses, pedestrians and cyclists.
3	Also with regard to the pedestrian crossing, how would it operate if pedestrians were attempting to cross from both sides at once? What is the longest time a pedestrian is likely to be detained in the median? What safety measures would be in place?	If two pedestrians placed a call for the pedestrian phase on both sides of Epping Road at the same time the traffic signals would stop both eastbound and westbound traffic along Epping Road and provide a green signal for both pedestrians to travel to the median and traffic to exit Mowbray Road west. These pedestrians would then need to wait in the median for the second phase of the crossing for up to two minutes. It is important to note that the two minute wait time is the worst case scenario. With regards to pedestrian safety, it is important to note that the crossing is located to the east of the intersection with Mowbray Road west and the western Tunnel portal. The median is over 12 metres wide at this location and is shielded by the western portal. During the detailed design development process all Project elements are subject to a four stage safety audit process and any additional safety features identified in this audit process are integrated into the Project. To date, the safety audits completed on this intersection have not found any pedestrian or cyclist safety concerns. Under the Approved Project, the Epping Road surface works would have been completed in a six month period after opening of the Tunnel. During this time a key element of the Traffic Management Plan would have been to address any pedestrian and cyclist safety issues. The proposed modifications extends the duration of construction by a five month period, but does not alter the nature or extent of construction works. Accordingly, the delay in completing the Epping Road works would not impact on the safety of pedestrians, provided that the measures outlined in the Traffic Management Plan are implemented. The nature and extent of construction works is not altered under the proposed modification. As noted in the RTA's Environment Assessment Report the required management measures will be identified in the Business Management Strategy required by Condition 218. It should be noted that the additional capacity provided along Epping Road in the first 11 months after Tunnel opening under the Proposed Modifications would provide a more seamless transition of the Project into the road network, with resultant benefits to all road users including businesses.
4	Are there any safety issues for pedestrians and cyclists arising from the delay in construction of Stage 2 works? Would these be managed under the Traffic Management Plan?	
5	What are the impacts on business from the delayed works likely to be?	

6 Could you clarify whether the bus bay at Military Road was ever intended to operate as a bus stop, or simply as a pull-over spot for buses? If it was intended to operate as a bus stop, would its removal be likely to have any significant impact on the local accessibility to buses?	The Director-General's Report (November 2002) indicates that the State Transit Authority requested that the bus facilities to be provided in the vicinity of Falcon Street be clarified and requested that a bus indent bay be provided at this location to STA's satisfaction. This request was reflected in Condition 238. The RTA understands that STA intended for this indent bay to be utilised as a bus stop. Notwithstanding, as indicated in the RTA's Environmental Assessment Report, the STA has advised the RTA that, in its opinion, safety and operational requirements cannot be met at this location. It is noted that current bus services do not utilise this location as a bus stop and the nearest bus stop is located 200 metres to the east of this location (at the Big Bear Shopping Centre). Accordingly, the RTA has proposed a modification to Condition 238 to facilitate resolution of this issue. Impacts on the local accessibility to buses are a matter for STA. However, the Proposed Modification allows other solutions to be considered (which would include accessibility) with the involvement of the PTC in further investigating the design and location of this bus indent bay.
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Mary Gibbs - RE: LCT modification - submissions

From: RICHARDS Caitlin <Caitlin_RICHARDS@rta.nsw.gov.au>
To: Mary Gibbs <Mary.Gibbs@planning.nsw.gov.au>
Date: 19/01/2007 16:35
Subject: RE: LCT modification - submissions
CC: Lisa Mitchell <Lisa.Mitchell@planning.nsw.gov.au>, HUMPHREY Garry R <Garry_HUMPHREY@rta.nsw.gov.au>, ANDERSON John Raymond <John_Raymond_ANDERSON@rta.nsw.gov.au>, ANDREW Mark S <mark_andrew@rta.nsw.gov.au>

Dear Mary,

As requested, please find attached the RTA's responses to the issues raised in representations from North Sydney Council, NSW Health and the Department of Environment and Conservation.

If you have any queries please do not hesitate to contact me.

Cheers

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From: Mary Gibbs [mailto:Mary.Gibbs@planning.nsw.gov.au]
Sent: Wednesday, 17 January 2007 14:56 PM
To: RICHARDS Caitlin
Cc: Lisa Mitchell
Subject: LCT modification - submissions

Caitlin,

Please see attached copies of two submissions received by the Department in regard to the proposed Lane Cove Tunnel modification. One is from NSW Health and the other from North Sydney Council (addressed to the Minister for Roads but copied to the Minister for Planning).

Please advise whether the RTA has any further comment to make on the issues raised in these submissions.

Regards,

Mary

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Lane Cove Tunnel

Surface Traffic Transition Strategy

Submission from North Sydney Council to the Minister for Roads, dated 3 January 2007

Please note that a response from the Minister for Roads to North Sydney Council is currently being drafted. The following preliminary response is provided to assist the Department of Planning in finalising its assessment of the Proposed Modifications.

No	Issue	RTA Response
1	Merlin Street Bus Bay	As detailed in the RTA's Environmental Assessment Report, while the RTA has prepared numerous designs for this bus bay in consultation with State Transit Authority (STA), it has not been possible to design a bus bay which addresses safety and operational requirements to the satisfaction of STA. Council (through the Falcon Street Construction Community Liaison Group) has been informed progressively of issues relating to the bus bay. The RTA has requested a change to Condition 238 to allow the location and design of this bus bay to be further considered through the project's Public Transport Committee (PTC), which includes representation from the Ministry of Transport, RTA, NSW Police and STA. The RTA will ensure Council's objection to the removal of this bus bay is reported to the PTC.
2	Surface Works Transition Strategy	An Integration Group comprising representatives from the Premier's Department, Treasury, the Ministry of Transport and the Roads and Traffic Authority (RTA) and Connector Motorways was formed by the Minister for Roads in June 2006 to investigate ways of better integrating the Tunnel and the expended Gore Hill Freeway into the surrounding road network. This Integration Group identified the need to stage the implementation of surface works associated with the Lane Cove Tunnel, but concluded that the entire Project, including bus and transit lanes

	and pedestrian and cyclist elements would need to be implemented to ensure that the full benefits of the Project are realised. The transition strategy being implemented by the NSW Government will delay the full implementation of the Project by five months (rather than 11 months as indicated in Council's submission) in order to provide a satisfactory level of service on the traffic network during the ramp-up period. It is noted that this strategy implements the recommendations of the joint bi-partisan Parliamentary Inquiry, the NSW Auditor General and the Richmond Review of motorways. The importance of public transport and pedestrian and cyclist elements was highlighted by the Integration Group which concluded that the Project objectives can only be fully realised once the Approved Project is implemented. The operational data gathered on other tunnel projects and, in particular, the Eastern Distributor (which is most comparable to the Lane Cove Tunnel Project) has allowed the RTA to consider the implications of ramp-up in detail. Traffic modelling completed by Masson Wilson Twiney clearly indicates that the short-term staging of the implementation of some surface works will improve traffic flow and associated travel times through the corridor. Therefore, staging of the implementation of surface roadworks would provide a satisfactory level of services during the ramp-up period and allow for a more seamless integration of the Project into the surrounding road network. As outlined above, the transition strategy being implemented by the NSW Government will delay the completion of the Project by five months. With the exception of the proposed changes to the pedestrian crossing of Epping Road at Mowbray Road, the further investigation of the Military Road bus bay and the implementation of feasible bus priority
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		facilities for westbound traffic on Epping Road, the Proposed Modifications do not alter the Project to be ultimately implemented.
3	Tolling	The implications of the tolling strategy applied to the Project were assessed in detail in the Environmental Impact Statement and it should be noted that no change to this strategy is proposed. The electronic tolling system being implemented is consistent with the long term unified strategy for all user paid road infrastructure in Sydney. The traffic modelling undertaken for the Project takes into consideration the effects of multiple tolls along a route when determining traffic volumes and avoidance levels. The use of standardised per kilometre tolling is not suitable for the Lane Cove Tunnel Project as it does not have intermediate entry and exits points. With respect to Council's comparison to the M7 Motorway, it should be noted that, unlike the M7 which has multiple entrances and exits, all Tunnel users will experience the same benefits. Consistent with the conclusions of the Director-General's Report, both the Integration Group and the RTA's Environmental Assessment Report conclude that the Project objectives can only be fully realised once the Approved Project is implemented. As noted above, the transition strategy will delay the full implementation of the Project by five months and is required to manage short term congestion on the road network during the ramp-up period following Tunnel opening. The potential for induced demand has been carefully considered in selecting this transition strategy and the five month delay in full Project implementation will provide a satisfactory level of service on the road network following Tunnel opening without the possible induced travel demand associated with longer transition periods. The traffic implications of the Project across the network were fully assessed in the Environmental Impact Statement. The traffic impacts across the road network have been considered in formulating this
4	Director-General's Report	
5	Impact on North Sydney	

		transition strategy. There is no change to the capacity of the Approved Project to be ultimately provided following the transition period.
6	LATM	In December 2006 a Report detailing the exhibited local area traffic management schemes and the findings of the public exhibition was submitted to Council for consideration. The required traffic management mitigation and implementation timeframes will be dependent on approval from Council. Depending on Council's preference, measures may be implemented shortly after Tunnel opening or following further traffic counts undertaken up to 18 months after Tunnel opening. As noted in the Report, following Council approval, construction of the schemes will be funded by the RTA, but designed and implemented by the relevant local Councils. The RTA awaits advice from Council regarding its preferred monitoring and/or implementation strategy.
7	Pedestrians	In line with the five month delay to full Project implementation, the RTA has proposed that the review of pedestrian walk times also be delayed by five months. There are no proposed changes to the pedestrian and cyclist elements to be provided as part of the Approved Project at Falcon Street. The proposed additional pedestrian and cyclist facilities at Falcon Street are not part of the Lane Cove Tunnel Project and Council's submission will be considered in assessing the Review of Environmental Factors on these facilities.

Lane Cove Tunnel

Surface Traffic Transition Strategy

Submission from NSW Health to the Department of Planning, dated 12/1/07

No	Issue	RTA Response
1	I note that the proposal to stage implementation of surface road changes over eleven months does retain the benefits to public transport, walking and cycling and reduction in surface road traffic largely as originally approved. These elements are key to achieving reduced population exposure to air pollutants and increasing opportunities for physical activity.	Noted.
2	The proposal to amend Condition 216 to allow an interrupted crossing of Epping Road at Mowbray Road is of concern. Other options to facilitate pedestrian usage, such as an overhead bridge, are not discussed in the assessment report. NSW Health would support the incorporation in the project of a safe and efficient means for pedestrians to cross Epping Road.	A staged pedestrian crossing of Epping Road at Mowbray Road west is required to provide an acceptable level of service at this intersection for all users, including motorists, buses and pedestrians and cyclists. Alternative options, including the provision of an overpass at this location, were considered in the EIS and Representations but discarded due to the relatively low level of pedestrian movements at this location, visual impact concerns, cost and the ability to cross under Epping Road via a connection under the eastern abutment of the Lane Cove River Bridge. The proposed two stage crossing provides a safe and efficient means for pedestrians to cross Epping Road.
3	The staging of the surface road changes effectively means that the full changes in air pollution and noise distribution will not commence until 11 months after the opening of the	While it is noted that under the Proposed Modifications, the entire project including bus and transit lanes would be implemented 11 months after Tunnel opening, under the Approved Project full

	tunnel. In the approved proposal the reduction in surface road capacity to two lanes each way would have occurred with tunnel opening. The report anticipates that road usage patterns, and thus air pollution and noise distribution, will not reach equilibrium until 18 months to 2 years after tunnel opening. This raises concerns regarding the monitoring period and auditing interval for noise and air quality impacts. In particular, Condition 166 regarding monitoring of elevated receptors requires: <i>"Monitoring shall be undertaken over a period of at least 12 months from opening of the Project to traffic to correlate and verify impacts with the air quality modelling predictions"</i> This condition should be amended to require monitoring for "at least 12 months after the completion of Stage 2 works" so that the full impact of stack emissions on the elevated receptors can be monitored as intended.	implementation of the Stage 2 Works would have been completed six months after Tunnel opening (see Condition 212 which requires that the bus lanes are implemented no later than six months after opening of the Tunnel). Therefore, the Proposed Modifications delay the full implementation of the Project by five months only. The Conditions of Approval currently require that 12 months of data is collected at the two elevated monitoring stations following Tunnel opening. The RTA has not proposed an extension of this monitoring duration for the following reasons: ◆ The current monitoring program, which requires the operation of six monitoring stations, is the most comprehensive program applied to any infrastructure project in NSW and, indeed, any known project; ◆ In requiring a shorter monitoring duration for the two elevated monitoring stations, the Minister for Planning acknowledged that the two Ground Based Monitoring Stations (GBMS) and two Community Based Monitoring Stations (CBMS) constitute a comprehensive monitoring network for compliance purposes; ◆ The extended construction period under the Proposed Modifications would not impact on the data collected at the two elevated monitoring stations; ◆ The nominated 12 month monitoring period for the elevated stations would ensure that seasonal variations are taken into consideration; ◆ The EIS for the project predicted a local air quality improvement and the inclusion of ambient air quality monitoring in the Conditions is based on the need for public reassurance rather
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	than actual air quality impact; ◆ Additional modelling completed for the detailed ventilation design has confirmed the findings of the EIS and indicates that it is highly unlikely that a comparison of data collected before and after Tunnel opening will detect any impact from the ventilation stacks; ◆ The findings of the detailed design modelling have been reviewed by the Dr Peter Manins, CSIRO, who confirms that air emissions from the ventilation stacks will not be discernable from the background; ◆ Air emissions from the M5 East and Cross City Tunnel stacks cannot be discerned from the ambient air quality monitoring completed to date on these projects; ◆ The background data collected to date from the six ambient stations installed for the Lane Cove Tunnel Project correlate closely, indicating that the pollutant readings at these stations are strongly controlled by regional air quality rather than local affects; ◆ The ambient air quality data to be collected under the exiting Conditions of Approval will be more than sufficient to undertake the required validation and assessment work, and will be well in excess of that which has been utilised to complete similar work on other projects; ◆ The leases on the elevated monitoring station sites are limited in duration and an extension of monitoring would need to be negotiated with the property owners and cannot be guaranteed; and, ◆ The cost of extending monitoring for five months is estimated to be in the order of \$500 000.
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		A detailed justification of the RTA's position (including comprehensive modelling work) was provided to NSW Health, the Department of Environment and Conservation and the Department of Planning on 10/1/07. NSW Health's representation does not address any of the technical aspects presented by the RTA and misinterprets the requirements of the Conditions of Approval. As highlighted above, the Proposed Modifications only delay the full implementation of the Project by five months, so the proposed 12 month extension of monitoring at the elevated stations is not in keeping with the intent of the Conditions. The RTA reiterates that 12 months of post operational data from the two elevated stations and the data from the two GBMS and two CBMS will be more than sufficient to gauge the impacts of the project as proposed to be modified and, as such, that there is no tangible benefit to be gained from extending the monitoring timeframes at the two elevated monitoring stations.
4	Similarly, Condition 60 (operational noise) and Condition 168 (verification of air quality assessment) should be timed to occur 12 months after the completion of Stage 2 works to be consistent with the intent of the original conditions.	As stated above, the Proposed Modifications would delay the full implementation of the Project from six months after Tunnel opening to 11 months after Tunnel opening (i.e. a delay of five months). The proposed changes to Conditions 60 and 168 outlined in the RTA's Environmental Assessment Report are in keeping with the intent of the Conditions and will ensure that the delay in full project implementation is taken into account in verifying operational noise and air quality impacts. The RTA has provided NSW Health with all the air quality monitoring and modelling work completed on the Lane Cove Tunnel Project to date for its consideration in relation to the Lane Cove Tunnel Health investigation. Notwithstanding, the RTA notes that the health impacts of this Project
5	The delay in implementation of the surface road changes creates an additional concern for NSW Health in relation to the Lane Cove Tunnel Health Investigation. This study has been designed to measure the health impacts of the maximal changes in air pollution expected to occur in relation to the project, including significant reductions in air	

	pollution exposure for people living near Epping Road. Baseline health assessments have already been completed in approximately 2000 local residents and were to be repeated in the second half of 2007. If the proposed modification is approved then the study design may have to be modified, which could reduce the power of the study to detect an effect and result in additional costs. Alternatively the study may have to include a third round of assessment in the second half of 2008 to include the full impact of the changes in distribution of air pollution. Should this be the case to ensure a valid result there will be considerable additional costs. NSW Health is of the view that the proponent should be required to contribute to the additional costs of the Lane Cove Tunnel Health Investigation that arise from the delayed implementation of surface road changes.	were assessed in the EIS and Representations Report and that NSW Health's study is not part of the Lane Cove Tunnel Project. As such, the RTA would be happy to discuss the implications of the transition strategy separately with NSW Health.
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Lane Cove Tunnel

Surface Traffic Transition Strategy

Submission from the Department of Environment and Conservation to the Department of Planning, dated 18/1/07.

No	Issue	RTA Response
1	The existing approval requires surface road changes to be completed within six months of tunnel opening. However, based on DEC's experience with similar projects, it is likely that measures to reduce surface road capacity would have been implemented contemporaneously with or shortly after tunnel opening. The existing approval also requires an assessment of noise mitigation and air quality monitoring to be undertaken at set times/ for set periods to assess the project's operational performance. RTA's proposed modification to the consent would allow staged implementation of surface road changes over an eleven month period after tunnel opening. The final operational road network configuration and traffic flow conditions would therefore not occur until 2008. DEC considers that any amendment of the project planning approval should be consistent with the underlying environmental objectives of the existing approval, including the intent of the monitoring requirements (Conditions 60, 166 and 168).	Under the Approved Project and the Proposed Modifications, the bulk of construction works along Epping Road between Mowbray Road and the Pacific Highway would be undertaken over a six month period. The time required to undertake these works has not been altered, rather the commencement date is proposed to be delayed by 5 months in order to provide a satisfactory level of service on the traffic network during the ramp-up period. Under the Approved Project, the bus lanes were required to be implemented six months after Tunnel opening and this commitment is reflected in Condition 212. During this six months period some lane closures would have been required to complete some of the required works, however it should be noted that the RTA assesses the need for lane closures on their merits and would not approve the installation of traffic barriers unless specifically required to complete work. The requirements of the Conditions referenced were considered in finalising the environmental assessment of the Proposed Modifications to ensure consistency with the intent of the Conditions and are discussed further below.
2	Condition 60 requires an assessment of noise mitigation measures per the Operational Noise Management Sub Plan to be undertaken one year from the opening of the project.	In recognition of the proposed delay in full Project implementation and the intent of Condition 60, the RTA has recommended delaying the operational noise monitoring required by this Condition for

	RTA is proposing a change in timing to six months after the completion of the surface works. An assessment of noise mitigation measures can be undertaken once the final operational road network configuration is implemented and traffic flow conditions have stabilised and the monitoring results are representative of typical noise impacts.	approximately 5 months. This extended timeframe is in keeping with the intent of the Condition as, consistent with the Approved Project, the proposed amendment would require monitoring six months after the completion of the entire project. As stated on page 6 of the RTA's Environmental Assessment Report, Connector Motorways has forecast a relatively rapid ramp-up in the first six months, followed by a slower ramp-up over the next 12 to 18 months. On this basis, the RTA considers that this delay in monitoring will ensure that monitoring results are representative of typical noise impacts.
3	Condition 166 requires the operation of elevated air monitoring stations for at least twelve months after project opening. Despite the delay in full project implementation, RTA is not proposing to extend the period of monitoring beyond twelve months after tunnel opening. This position is based on modelling results which indicate that air quality impacts at these locations are incremental and indiscernible from normal variations in background air quality. DEC concurs that there is no technical basis for undertaking extended monitoring at the elevated air monitoring stations. DEC understands that the intent of the air monitoring network (including the two elevated monitoring stations) was 'to provide a high degree of assurance' to the community by providing confirmation of the model predictions. It is not clear whether retention of the existing condition would fulfil this objective with the proposed delay in full project implementation.	The Conditions of Approval currently require that 12 months of data is collected at the two elevated monitoring stations following Tunnel opening. The RTA has not proposed an extension of this monitoring duration for the reasons listed in the additional information provided on 10/1/07. It is noted that the DEC concurs that there is no technical basis for extending this monitoring duration. With respect to the DEC's comments regarding the need to provide a high degree of assurance to the community, it is noted that the Director-General's Report indicates that the 12 month monitoring duration was required based on community perception rather than actual impacts. Consistent with the Approved Project, the air quality impacts of the Project as proposed to be modified will not be discernable from the background. The RTA reiterates that 12 months of post operational data from the two elevated stations and the data from the two GBMS and two CBMS will be more than sufficient to gauge the impacts of the project as proposed to be modified and, as such, that there is no tangible benefit to be gained from extending the monitoring timeframes at the two elevated monitoring stations.

4	Condition 168 requires validation of the ambient air quality modelling predictions for the project using monitoring data following twelve months of operation of the project. As the ambient air quality assessment is based on emissions from full project implementation, DEC suggests that the validation required by Condition 168 incorporate twelve months of emissions due to the operation of the full project, and be undertaken following twelve months of full project implementation.	In its Environmental Assessment Report, consistent with the intent of the Condition, the RTA has proposed delaying this validation work to six months after the completion of the entire project. Notwithstanding, the RTA is not opposed to further delaying this work by seven more months to 12 months after the implementation of the entire project as proposed by DEC, although this is not in keeping with the timeframe specified in the Condition of Approval.
5	DEC understands that the tunnel operator proposes to voluntarily implement a toll free period after the tunnel opens. Comprehensive air monitoring during this period could be beneficial in determining whether any early fine tuning of the ventilation system is warranted.	As stated on page 6 of Appendix B, Connector Motorways have announced that the first month after Tunnel opening will be a toll free period. Detailed in-tunnel, in-stack and ambient air quality monitoring will be undertaken from Tunnel opening in accordance with the Conditions of Approval. While the detailed design and operating parameters for the ventilation system have been finalised based on the modelling work completed to date, in accordance with standard practice, Connector Motorways will assess the effectiveness of operation of the ventilation system from Tunnel opening to determine whether refinement of operating procedures is required.

Mary Gibbs - FW: Proposed amendment to Condition 60

From: RICHARDS Caitlin <Caitlin_RICHARDS@rta.nsw.gov.au>
To: Mary Gibbs <Mary.Gibbs@planning.nsw.gov.au>, Lisa Mitchell <Lisa.Mitchell@planning.nsw.gov.au>
Date: 24/01/2007 10:14
Subject: FW: Proposed amendment to Condition 60
CC: ANDERSON John Raymond <John_Raymond_ANDERSON@rta.nsw.gov.au>, HUMPHREY Garry R <Garry_HUMPHREY@rta.nsw.gov.au>

Dear Mary,

Refer to your query regarding notification of the proposed change to the operational noise monitoring timing. In addition to notifying all affected property owners who have received mitigation of the new monitoring timeframe, RTA will also ensure that any property owner ineligible for treatment, who has been previously advised in writing of the operational noise monitoring requirements, are notified of the new monitoring timeframes.

Cheers

Caitlin Richards
Environment Manager
Lane Cove Tunnel
Roads and Traffic Authority
7 Sirius Road, Lane Cove West 2066
Ph 02 9417 9506
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Mob 0413 119 490

From: Netterfield, Sue, TJH [mailto:Sue.Netterfield@LCT.inCITE.com.au]
Sent: Tuesday, 23 January 2007 18:08 PM
To: RICHARDS Caitlin
Subject: Proposed amendment to Condition 60

Message

Dear Caitlin

TJH understands proposed amendment to MCoA would change the timing of noise monitoring (for the purpose of verifying operational noise mitigation measures) from 12 months to 17 months after the project opens to traffic.

TJH is prepared to write to property owners who have previously been advised in writing that they were ineligible for noise treatment and advise them of the change in timing of the required noise monitoring.

Kind regards

Sue Netterfield
Community Relations Manager
Thiess John Holland

Sent via NEXUS V3/DX LCT (<http://www.inCITE.com.au>) by thinkproject v3.0r01pl10

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