

Airport Link

Request for Project Change

RESPONSE TO SUBMISSIONS

21 July 2008

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1. Introduction

The Airport Link Reference Project was evaluated by the Coordinator-General in May 2007.¹ A Request for Project Change to the Airport Link Reference Project was submitted to the Coordinator-General on 30 May 2008. Consistent with the *State Development and Public Works Organisation Act 1971* (Qld), the purpose of the Request for Project Change is to request the Coordinator-General to evaluate the environmental effects of the proposed change and its effects on the project and any other related matters. The Changed Project retains the key features and function of the Reference Project.

The requested changes to the Airport Link Project fall into two broad categories:

1. changes in project design – connections to the surface road network, alignments of the tunnels, changes to the location of ventilation stations, outlets and the tunnel control centre; and
2. changes in project delivery – construction of the east-west tunnels and the Kedron connecting ramps, cut and cover construction through Kedron Brook, the expansion of construction worksites and additional worksites shared by the Northern Busway construction, a northern spoil haulage route and the potential for TBM spoil to be removed via a conveyor and alternative spoil placement sites, including within the Brisbane Airport land.

The scope of the changes in project design and delivery relate to design innovations developed by BrisConnections (BC), the preferred tenderer, and in part relate to the recommendations made by the Coordinator-General seeking innovation in the project design and construction to further mitigate the impact of the Reference Project on sensitive areas particularly at the Bowen Hills and Kedron surface connections. Further mitigation of the visual impact of the ventilation stations and outlets, particularly at Clayfield has also been achieved as a result of the innovations brought to the Airport Link Project by the Changed Project.

The Request for Project Change recommended that the Changed Project proceed, subject to the conditions of the Coordinator-General's Report and subject to some changed conditions particularly relating to the following issues:

- management of spoil placement sites;
- spoil haulage, including by conveyor;
- management of worksites;
- construction car parking;
- works in Kalinga Park;
- other changes/amendments to conditions necessary because of the Changed Project.

Public notice of the Request for Project Change was given by way of a notice in the *Courier Mail* on 31 May, 2008. The submission period closed on 30 June 2008. Fifty two (52) submissions were received and considered in this report.

¹ Coordinator-General's EIS Evaluation Report on the Airport Link Project, May 2007.

2. Project Description

2.1 Airport Link Reference Project

The Airport Link Project comprises two parallel road tunnels and associated surface connections and supporting infrastructure for tunnel ventilation and operational control and management. Each of the north-south mainline tunnels would accommodate three traffic lanes and each of the east-west tunnels would accommodate two traffic lanes. The southern portals at Windsor, south of Federation Street, would connect to and from the Inner City Bypass (ICB), the North South Bypass Tunnel (NSBT), and the City via O'Connell Terrace and to Fortitude Valley via Campbell Street. The north-western portals in Lutwyche Road and within the Department of Emergency Services (DES) land would connect both the north-south tunnels and the east-west tunnels to and from Gympie Road and Stafford Road and with access to and from Lutwyche Road via the east-west tunnels. The north-eastern connection at Clayfield provides access to and from Sandgate Road via ramps to the west of Sandgate Road and the East-West Arterial via the mainline tunnel portal east of Sandgate Road.

Changes to the surface road will be required to effect transport access to the tunnel. At the southern portal these connection works will be significant (including elevated structures) to allow for connection to the ICB, the NSBT, Campbell Street and O'Connell Terrace. Surface connections at Kedron propose major elevated structures across Kedron Brook from Lutwyche Road to and from Stafford and Gympie Roads.

Supporting infrastructure for tunnel operations include in-tunnel safety systems, fire protection and monitoring systems and pressurised cross passage safety exits provided at 120 metre intervals which link the main tunnels. The ventilation system includes elevated ventilation outlets for high level dispersion of vitiated air from the tunnels in Windsor, Kedron and Clayfield linked to ventilation stations housing the extraction fans and associated electricity sub-stations. The toll road control centre was proposed in the Reference Project to be located at Windsor with support facilities at Kedron.

2.2 Requested Changes

The State has accepted a proposal offered by BC for Airport Link which is generally comparable to the Reference Project but incorporates a number of improvements and innovations, in response to the Coordinator-General's request for innovation. The Changed Project incorporates improvements in design, which would result in changed impacts both in terms of location, timing and scale. The Changed Project would achieve the objectives of the Reference Project while delivering enhancements in network performance and urban amenity at Lutwyche and Kedron, and addressing the impacts of concern to the Coordinator-General in the Reference Project at Bowen Hills.

The design changes from the Reference Project are presented in the Request for Project Change (Section 2) and are summarised below:

- changes in the connections with the surface road network at Windsor / Bowen Hills, Lutwyche / Kedron and at Clayfield to achieve more efficient traffic flows from the surface road network to and through the Changed Project, and to reduce the impacts of the infrastructure on the surface at Kedron and Lutwyche. These changes would result in some of the ramps to the surface road

network being constructed underground beneath Kedron Brook and Lutwyche in the vicinity of the Woolloowin State School and St Andrew's Anglican Church;

- changes in the alignment of the mainline tunnels to accommodate more efficient connections in the north-west, while achieving more efficient and more certain construction conditions in better ground through Lutwyche and Woolloowin. These changes would result in the mainline tunnel alignments moving east and south in a sweeping arc between Lowerson Street Lutwyche and Park Avenue Woolloowin;
- minor changes in the location of the ventilation stations at Kedron and Windsor to reduce the visual impact of the facilities, and the partial burial of the ventilation station at Windsor and complete burial of the ventilation station at Clayfield to reduce the visual impact of each of these buildings;
- relocation of the toll road control centre to a site at the corner of Stafford Road and Clarence Street, Stafford to allow improved access to the Changed Project tunnel system.

Whilst the EIS assessed a construction method for the Reference Project, it was recognised that construction methods would have the potential to vary depending on detailed design and ground conditions. BC have proposed construction methods that differ from those described in the EIS. The proposed changes to the project delivery mode are summarised as follows:

- construction of the mainline tunnels between Chalk Street and Kalinga Park with two TBMs launching from Kalinga Park, Clayfield. Spoil from TBM construction would be transported from the Clayfield worksite by conveyor;
- a worksite at Chalk Street, to be shared with the Northern Busway Project, would be required for the removal of each of the TBMs in components;
- construction of the connecting ramps from Lutwyche and Kedron by a combination of cut and cover and roadheader methods, including a cut and cover construction through and beneath Kedron Brook and beneath Lutwyche;
- construction of the mainline tunnels between Clayfield and Lutwyche at generally increased depths for TBM construction, and between Lutwyche and Windsor at generally reduced depths to facilitate accelerated construction at multiple faces by roadheader equipment;
- for spoil haulage, the use of alternative routes along arterial roads including Gympie Road, Rode Road, Sandgate Road and Toombul Road to form a northern haulage route, in addition to spoil transport by the proposed conveyor system and the use of the southern haulage route identified in the EIS (i.e. south along Lutwyche Road and then across to Kingsford Smith Drive via the local road network or via the Inner City Bypass); and
- the shared use of worksites with the Northern Busway Project at Chalk Street and Truro Street to capture potential construction efficiencies and design improvements.

3. Consultation

A range of consultation activities have been completed in association with the preparation and notification of the Request for Project Change.

3.1 Community Information and Consultation

3.1.1 Visitor Information Centre

The Visitor Information Centre, located at 109 Gympie Road, Kedron was established by the State in cooperation with BC. The Visitor Information Centre opened on Thursday 22 May 2008, and was open at the following times:

- Monday, Wednesday and Friday: 10am – 4pm
- Tuesday and Thursday: 2pm – 7pm
- Saturday: 9am – 12noon

The Visitor Information Centre will remain at this site until the permanent BC's Visitor Information Centre is open. From the week commencing 7 July 2008, the opening hours will be revised with days of opening being Wednesday to Saturday.

The Visitor Information Centre displayed information about the BC's preferred solution, and during the public notification period for the Changed Project, displayed the Request for Project Change documents and supporting information. More than 1,350 people visited the centre to 30 June 2008.

3.1.2 Project Information Line (1800 number)/Email/Contact Records

A range of general enquiry methods were established for the Airport Link Project to enable community members to provide input and obtain information on the Changed Project. This includes a freecall project information line and email. Details of these were provided in project materials, including the project newsletter, website, advertisements and public displays. As of 30 June 2008, a total of 328 enquiries had been made to the freecall project information line (222 calls) and project email (106 emails). The majority of enquiries related to employment and supplier opportunities, noise and vibration impacts, request for information about the Changed Project, and property acquisition.

3.1.3 Stakeholder Briefings

Briefings were conducted with a range of interested stakeholders, including Government agencies and community organisations. This included separate briefings to relevant Queensland Government agencies and Brisbane City Council agencies on 5 June 2008. Further briefings and consultations occurred during the notification period with specific agency interests (eg Department of Main Roads, Queensland Transport, Urban Land Development Authority (ULDA)).

Meetings were held with the following community stakeholders:

- Windsor & District Historical Society;
- Nundah & District Historical Society;

- Aviation High School, Hendra;
- Kedron Brook Catchment Network;
- Kalinga Community Group;
- Woolloowin State School, Windsor State School and Kedron State High School (KSHS), as part of the CNI School Reference Group.

Properly owners newly affected by the Changed Project were notified by letter on 19 May 2008. Meetings were also held with property owners to discuss the acquisition process.

3.1.4 Project Newsletter

A project newsletter was produced to provide information on Airport Link, including the Changed Project and community consultation activities. The newsletter also included information on the Northern Busway (Windsor to Kedron) and the Airport Roundabout Upgrade Project. Approximately 155,000 newsletters were distributed by direct mail to residents, businesses and property owners, through libraries, ward and electoral offices and public displays, at the Visitor Centre and Community Information Sessions.

3.1.5 Public advertisements of community consultation

Public advertisements were placed in local and state newspapers to provide updates on the Changed Project and to notify community members of community consultation activities, including the community information sessions and visitor centre. These included:

- The Courier Mail on 20 May 2008, The Sunday Mail on 25 May 2008 and Quest Newspapers in the week commencing 26 May 2008, to announce the preferred tenderer and notify opening of the Visitor Centre;
- Local Quest Newspapers and MX Newspaper on the week commencing 9 June 2008, advertising community information sessions and other consultation activities.

3.1.6 Website

The Airport Link EIS website was updated on 31 May 2008. It contained the Request for Project Change and documentation supporting the notification process.

A separate Queensland Government project website was also updated on 19 May 2008 with information on BC's preferred design and community consultation activities. This included links to the Airport Link EIS website.

3.1.7 Community Information Sessions

Three community information sessions were conducted during May and June 2008 to provide opportunities for community members to find out more about the Changed Project and to meet with the Project Team. Members of the BC project team were also present at the information sessions. The community information sessions were advertised through the project newsletter, advertisements in Quest newspapers, project website and the 1800 information line.

Approximately 290 people attended the three community information sessions. Session dates, times, venue and attendance are as follows:

Date	Time	Venue	Attendance
Saturday, 31 May 2008	10 am – 1 pm	Kedron State High School Park Road, Wooloowin	200 (approx)
Thursday, 12 June 2008	5.30 pm – 8.30 pm	Windsor Table Tennis Centre 86 Green Terrace, Windsor	53
Saturday, 14 June 2008	10 am – 1 pm	St Colombs Anglican Church 23 Victoria Street, Clayfield	38
Total			291 (approx)

3.2 Public Notification

The Coordinator-General publicly notified the Request for Project Change in the Courier Mail on Saturday, 31 May 2008 and invited public submissions on the proposed changes to be received by Monday, 30 June 2008. An additional notice was also placed in local Quest Newspapers for the week commencing 2 June 2008.

Material supporting public notification included:

- Notification of the Request for Project Change;
- Request for Project Change report and supporting documentation;
- Technical reports supporting the Request for Project Change;
- A CD-Rom containing copies of the Request for Project Change, supporting information and technical reports;
- Airport Link EIS and Supplementary Report;
- Display material describing the Changed Project, assessment process, and submission requirements; and
- Display material for the Reference Project to enable people to make a comparison with the Changed Project.

The Request for Project Change and the above supporting information was also on display and available for review from 31 May until 30 June 2008 at the following locations:

- Brisbane Square Library, Ground Floor, 266 George St, Brisbane
- Chermside Library, 375 Hamilton Road, Chermside
- Nundah Library, 1 Bage Street, Nundah
- Grange Library, 79 Evelyn Street, Grange
- Hamilton Library, Cnr Racecourse Road and Rossiter Parade, Hamilton
- Queensland Transport Customer Service Centre, 477 Boundary Street, Spring Hill.

Copies of the Request for Project Change and the above supporting information was also available:

- on the Airport Link website at www.airportlink.com.au
- the EIS website at www.airportlinkeis.com

- the Coordinator-General's website at www.dip.qld.gov.au
- at the community information sessions;
- at the visitor's centre;
- as a CD-Rom containing copies of the Request for Project Change, supporting information and technical reports available free of charge upon request;
- as hard copies of the Request for Project Change, supporting information and technical reports available upon request for the fees nominated in the public notice for each document.

3.2.1 Key Issues during Consultation Activities

Key issues raised by community members through community enquiries to the project information line, email, visitor centre and community information sessions included:

- Property acquisition, including location of properties to be acquired, acquisition process and impact on property values;
- Impacts on local amenity during construction, including noise, dust, vibration and access;
- Changes to park and open space areas including the dog off-leash area at Kedron Brook and landscaping and pedestrian and cycle networks at Kalinga Park; and
- Air quality and ventilation, including location of ventilation outlets, changes to air quality, and need for filtration.

Other calls related to:

- Requests to be registered for further information; and
- Employment and supplier opportunities.

3.3 Conclusion

Approximately 1,970 people participated in community information or consultation activities on the Airport Link Project, including the Visitor Information Centre, information sessions and email and phone discussions to the 30 June 2008.

4. Responses to Submissions

A total of 52 submissions, including 16 from Queensland Government Agencies, were received by the Coordinator-General.

A full summary of each of the submissions is provided in **Appendix A**. A further summary of the relevant issues based on the submission analysis contained in the Supplementary Report for the Airport Link EIS of April 2007, is contained in **Appendix B**. Appendix B provides references to relevant sections of both the EIS and the Request for Project Change in relation to submissions received on the Reference Project and their effect on the Changed Project.

The Coordinator-General has already recommended that the Airport Link Reference Project proceed subject to the recommendations and conditions provided in the Coordinator-General's EIS Evaluation Report of May 2007. The Request for Project Change did not reassess issues which relate to the Airport Link Project as a whole and which do not change with the Changed Project.

A number of submissions have raised issues with respect to other projects being delivered with proximity to the Changed Project, including the NSBT, the Northern Busway and the Airport Roundabout Upgrade Project. Each of these projects is proceeding through distinct approval and delivery arrangements. The NSBT Project is being delivered by River City Motorway under a contract with Brisbane City Council (BCC), and is already approved and under construction. The Northern Busway and the Airport Roundabout Upgrade Project are also being delivered by BC, however under separate delivery arrangements to Airport Link. The Northern Busway Project has been assessed under the Concept Design and Impact Management Plan (CDIMP) process and the Airport Roundabout Upgrade Project will be assessed consistent with Department of Main Roads practices and procedures. Both the Northern Busway Project and the Airport Roundabout Upgrade Project are being delivered through "design and construct" contractual arrangements. Submissions with respect to these projects are not addressed in this report.

Submissions contained a number of categories of issues, being:

- issues dealing with other projects, as outlined above;
- issues which are not affected by the proposed changes to the Reference Project;
- issues of either support or concern relating to changes to the Reference Project;
- issues which relate to matters of detailed design and construction impacts.

4.1 Summary of Submissions

A summary of the issues received in the 53 submissions from the public notification of the Request for Project Change is shown below in **Table 1** below. The issues are set out in relation to the major elements of the Changed Project as presented in the EIS and the Request for Project Change.

Table 1 - Summary of Submissions

Element	Summary of issues (submission reference shown in brackets)
Project Design Changes	
4.2 Traffic And Transport	<p>1 Stafford Road, Richmond St and Glenfern Ave (2, 18);</p> <p>2 Hamilton Place, Mayne Road and Campbell Street, Bowen Hills (12, 37);</p> <p>3 Campbell Street on and off-ramps (12);</p> <p>4 Bowen Bridge Road Airport Link Connection (37);</p> <p>5 Inner City Bypass (37);</p> <p>6 Lutwyche Road tunnel portal effects on east-west connectivity (37);</p> <p>7 Effect of the Changed Project on the NSBT (37);</p> <p>8 Windsor East Access via Gallway Street (37);</p> <p>9 Opening of Swan Street to traffic (15, 29);</p> <p>10 Adequacy of portal connections with State-controlled roads (17, 37);</p> <p>11 Loss of the direct connection from Airport Link (east-west tunnel) to Lutwyche Road (31);</p> <p>12 Increased toll for heavy commercial vehicles (31);</p> <p>13 Demand for Airport Link (31);</p> <p>14 Traffic volume effects (17, 31);</p> <p>15 Pedestrian and cycle path design (11, 17, 31, 38, 39, 40, 41).</p>
4.3 Air Quality	<p>1 Air quality modelling and health impacts (33);</p> <p>2 Air quality monitoring (38, 39, 40, 41);</p> <p>3 Details of ventilation outlet at Byrne Street (4, 27);</p> <p>4 Requirement for air filtration from the Changed Project (13, 21, 33, 34, 38, 45);</p> <p>5 Air quality effects in the residential areas of Windsor (10, 48);</p> <p>6 Air quality effects in Kalinga (26, 45);</p> <p>7 Ventilation Station Outlet at Clayfield (21, 26, 43, 45);</p> <p>8 Greenhouse (17).</p>
4.4 Noise and Vibration	<p>1 Open mainline tunnel portal west of Sandgate Road (5);</p> <p>2 Operational noise criteria (14, 17, 32, 48);</p> <p>3 Noise impacts - Gympie Road (38, 39, 40, 41).</p>
4.5 Flora and Fauna	<p>1 Clearing of habitat (43).</p>

4.6 Land Use and Planning	<p>1 Draft neighbourhood plan (37);</p> <p>2 Land tenure (25).</p>
4.7 Cultural Heritage	<p>1 Kalinga Park and Diggers Drive (20, 49);</p> <p>2 Aboriginal cultural heritage (25).</p> <p>3 Cultural Heritage (47)</p>
4.8 Social Environment	<p>1 Provision for homeless people (12);</p> <p>2 Affect of the Changed Project on local residents (10, 16, 21, 24, 26, 27, 38, 39, 40, 41, 45, 48, 52).</p>
4.9 Urban Design and Visual Environment	<p>1 Visual impact of the Clayfield Ventilation Station Outlet (26);</p> <p>2 CPTED issues associated with the proposed pedestrian and cycle network (12);</p> <p>3 Open space (11, 37);</p> <p>4 The fire and water compound (37);</p> <p>5 Relocation of the tunnel control centre (24, 32, 44);</p> <p>6 Public art opportunities of the ventilation outlets and urban design treatments 37);</p> <p>7 Urban design treatments under the elevated structures at Enoggera Creek and Kedron Brook (37);</p> <p>8 Urban design of structures including noise walls (38, 39, 40, 41);</p> <p>9 Urban design themes (17, 43, 48);</p> <p>10 Urban design and road safety (17).</p>
4.10 Hazard and Risk	<p>1 Flood mitigation (25, 37);</p> <p>2 Incident management (33).</p>
4.11 Urban Regeneration	<p>1 Resumption of the current dog off-leash area for a cycle track (15, 36, 37, 51);</p> <p>2 Redevelopment opportunities (35).</p>
4.12 Cumulative Impacts	<p>1 Cumulative road network considerations (31, 37)</p>

Project Delivery Changes	
4.13 Construction Methodology	<ul style="list-style-type: none"> 1 Approvals (22, 25); 2 Construction noise and vibration at sensitive places (17, 19); 3 Requirement for a water licence (6); 4 Risk to water quality and the maintenance of flows during construction of the Kedron Brook/Schulz Canal cut and cover (11); 5 Impact of construction on the North Coast Rail Line and Airtrain (31); 6 Changes to alignment of mainline tunnels and the effects of underground ramps (14, 43, 52); 7 Construction management (38, 39, 40, 41).
4.14 Spoil Handling, Haulage and Placement	<ul style="list-style-type: none"> 1 Water quality impacts on Kedron Brook/Schulz Canal (11); 2 The extraction of coal during construction (6); 3 Southern spoil haulage route (37); 4 Northern spoil haulage route (28); 5 Spoil haulage through the Airport Roundabout (17, 47); 6 Construction and operation of the spoil conveyor (17, 30, 31); 7 Use of Rode Road as a northern haul route (28, 37, 47); 8 Impact of spoil haulage on road pavements for State controlled roads (17); 9 Impact of spoil haulage on network performance (17, 47); 10 Amenity impacts of spoil haulage (17, 27, 28, 38, 47); 11 Acid sulphate soils management (25).
4.15 Construction worksites	<ul style="list-style-type: none"> 1 General amenity issues from proposed worksites (3, 10, 14, 17, 38, 39, 40, 41); 2 Impacts of the Windsor Worksite (4, 10, 16, 27, 48); 3 Impacts of the Kedron Worksite (17, 24, 32); 4 Impact of the Clayfield Worksite (21, 26); 5 Impacts of the Chalk Street and Truro Street Worksites (14); 6 Construction Traffic Management (17, 37); 7 Construction site access (17, 37).

4.16 Impacts on Schools	1 Construction impacts on Kedron State High School and Woolloowin State School (7, 13); 2 Student welfare in accessing schools during construction (7, 13); 3 Impost on existing air conditioners from dust from construction worksites at Kedron State High School (7, 13); 4 Compensation for schools for volumetric acquisition and impacts (7, 13); 5 Impact of construction on Kedron State High School ovals (7, 13); 6 Woolloowin State School pick up and set down facility (7, 37); 7 Proximity of ventilation outlets to schools (7, 13); 8 Potential redevelopment of the DES complex (7, 13); 9 Emergency evaluation procedures (7, 13).
4.17 Process related matters	1 Consultation process (14); 2 Project delivery process (35); 3 Community engagement (26, 38, 42, 47, 50); 4 Properties above the tunnels should be resumed (14); 5 Request for Property Resumption - 5 Morris Street (16); 6 Property resumption (44); 7 Compensation (24, 27, 33).

The following section of the report provides a response to the issues raised in the submissions under the elements identified above.

4.2 Traffic and Transport

4.2.1 Stafford Road, Richmond St and Glenfern Ave

Submissions

The submissions raise concerns regarding the proposal to widen Stafford Road with the inclusion of a turning lane into Richmond Street and a left-in left-out turn only from Glenfern Avenue with a prohibition on right turns from Glenfern Avenue. The submission claims that the predominant movements of residents from Glenfern Avenue is a right turn to head west along Stafford Road to shops and schools, and the removal of the ability to turn west along Stafford Road will require alternative routes using quiet residential streets. Traversing into the Richmond Street right hand turn from Stafford Road will also create traffic problems. Return journeys from Stafford/Gympie Roads will require some form of U turn to be in position to enter Glenfern Avenue.

The submissions suggest a solution by extending the traffic lights presently at Richmond Street to include Glenfern Avenue. This would allow the Glenfern Avenue residents to enter and exit more easily and

safely. Access to Glenfern Avenue from Stafford Road could then be gained via Lambert/Richmond Street. The submission suggests that this is the solution preferred by residents.

Response

Glenfern Avenue is a small residential cul-de-sac located in close proximity to the existing signalised intersection of Stafford Road and Richmond Street. Richmond Street is a bus route, and a distributor road linking to Thistle Street and Bradshaw Street connecting to the Lutwyche business and shopping precinct. Currently there is no separate lane provision for right turn traffic from Stafford Road west into Richmond Street, and thus right turn movements into and out of Glenfern Avenue are permitted. Traffic capacity upgrading and safety improvements at the intersection of Stafford Road and Richmond Street would require that a right turn pocket is provided for turning movements into Richmond Street, and the length of this turn pocket would need to extend beyond the Glenfern Avenue access which is only approximately 30 metres to the west. This requirement precludes the ability to continue to allow for right turn movements into and out of Glenfern Avenue within an upgraded intersection design along the Stafford Road arterial route. Alternative access and egress routes, albeit more indirect than the current arrangements, are available within the local road network for the small traffic catchment served by the Glenfern Avenue cul-de-sac.

4.2.2 Hamilton Place, Mayne Road and Campbell Street, Bowen Hills

Submissions

Submissions seek to ensure that sufficient intersection capacity is available with provision of right turn pockets and the safe operation of the slip lane arrangements, and that Campbell Street be designed with appropriate width to ensure service vehicle access to private properties.

Submissions express concern that the Request for Project Change does not demonstrate whether the section of Campbell Street extending from the Mayne Road/Hamilton Place intersection to the Abbotsford Road intersection has sufficient capacity to accommodate anticipated future traffic volumes. Submissions seek to ascertain whether any additional road widening or streetscape works are proposed along this section of Campbell Street to accommodate the additional traffic volumes resulting from Airport Link.

Submissions are concerned with the likely length of traffic queuing at the Mayne Road/Hamilton Place Junction during peak periods, noting that the proposed Airport Link is likely to generate additional traffic along Campbell Street. The concern submitted is that this will result in queuing along Mayne Road and Hamilton Place at the Campbell Street intersection which would detract from the amenity of businesses, residents and other users of the area and lead to traffic delays and safety issues for pedestrians and motorists. The submission has requested additional information on the proposed signal cycle and phasing times for the junction in order for the likely impact on traffic flows within the Bowen Hills TOD to be addressed.

Response

The Changed Project forecasts some increase in traffic associated with the Campbell Street ramps but equally provides greater opportunity for local connectivity by relocating the O'Connell Terrace ramps to Lutwyche Road.

As provided in the Request for Project Change (p44), the Changed Project does not substantially alter the layout of the Campbell Street/Mayne Road/Hamilton Place intersection. However, performance of this intersection is predicted to be impacted by more intense development proposed as part of the Bowen Hills UDA. The impact of the Campbell Street ramps is not considered to have changed significantly from the Reference Project – particularly in the way that this connection both draws and distributes traffic within the

Bowen Hills UDA. Table 2 below summarises the forecast traffic volumes on Campbell Street with the Reference Project and Changed Project, and demonstrates that the Changed Project effect would be very minor.

Table 2 Reference Project & Changed Project – Comparison of forecast Campbell Street Traffic Volumes

Time Period	2022 Average Weekday Traffic*	
	Reference Project	Changed Project
AM Peak Hour	2,730 vph	2,780 vph
PM Peak Hour	2,640 vph	2,650 vph
Average Weekday	30,900 vpd	29,300 vpd

* Forecasts for both Reference Project and Changed Project are based on the upgraded Airport Link traffic model derived from the BSTM.

Operational signal phasing and cycle times would be addressed within the detailed design process in conjunction with the relevant Authorities. For impact assessment, a cycle time of 150 seconds has been assumed, consistent with other intersections in the general vicinity. SIDRA assessment indicates that there is very little difference in the expected average peak period queue lengths on Mayne Road and Hamilton Place with the Reference Project and the Changed Project.

4.2.3 Campbell Street on and off-ramps

Submissions

The submission seeks clarification on the proposed road layout and traffic circulation around the Campbell Street on and off ramps and provision for access under the ramps via Tufton Street. The submission considers that Tufton Street will provide an important link from the Queensland Newspapers site, on the corner of Campbell Street and Mayne Road, to Bowen Bridge Road via O’Connell Terrace and it is therefore important that this movement is maintained.

Response

The Reference Project incorporated the NSBT road network changes in this area which included the closure of Campbell Street as a link between Bowen Bridge Road and Mayne Road.

The NSBT Project now under construction was approved with the closure of Campbell Street between Sneyd Street and the Exhibition Railway. The Airport Link Reference Project did not propose any changes to NSBT. The Changed Project does not propose any changes to NSBT or any significant changes to Campbell Street. Tufton Street would remain open to vehicular and pedestrian traffic with the Changed Project.

At the time of the Reference Project the area was under investigation as a possible Transit Oriented Development (TOD) area and a master plan had yet to be developed. The EIS noted that future development in the area would need to plan for and accommodate the traffic and access changes resulting from Airport Link.

Increased connectivity will increase the attractiveness of the area for redevelopment and that intensified redevelopment could be facilitated in a manner consistent with possible future master plan intentions. A Bowen Hills master plan should plan for and accommodate land use changes resulting from Airport Link.

Since the EIS was completed, the ULDA has been formed and has taken over the planning for the Bowen Hills Urban Development Area. The development scheme for the Bowen Hills UDA is still in preparation and should take into account existing and approved infrastructure in the area, amongst other things. The proponent will continue to consult with the ULDA during the preparation of the development scheme.

As reported in the Request for Project Change, O'Connell Terrace would be retained as a suburban road and would not be used as a connection for city traffic, maintaining its essential function for local businesses and the RNA grounds. As a consequence there is no change to the road form or pedestrian link along O'Connell Terrace due to the Changed Project, and O'Connell Terrace continues to function as approved in the NSBT Project.

The access proposed in the Airport Link Reference Project to the Queensland Newspapers site from Tufton Street under the proposed Airport Link Campbell St ramp is unchanged with the Changed Project. The Changed Project would not prevent the extension of Tufton Street northwards, if that was an outcome of the master planning process adopted in the development scheme.

4.2.4 Bowen Bridge Road Airport Link Connection

Submissions

The submission expresses concern over whether the Bowen Bridge Road Airport Link connection will have sufficient capacity to provide connection to the ICB and NSBT (Clem Jones Tunnel). The submission notes that the proposed trap lane arrangements restrict Bowen Bridge Road outbound to two lanes. The submission also has concerns over the safe operation of the BP/ Hungry Jacks exit to Bowen Bridge Road and safe pedestrian movement along Bowen Bridge Road.

Response

In the Changed Project a single lane diverging from Bowen Bridge Road north of the Butterfield Street intersection would cater for traffic from the Bowen Hills and Herston precinct travelling to Airport Link, ICB west and NSBT.

Traffic modelling for the Changed Project indicates that during the 2022 peak periods this connection would have a forecast use of 750 vph in the AM peak and 1,750 vph in the PM peak. These volumes could be satisfactorily accommodated in the northbound single lane diverge which then widens to two lanes on the ramp. The traffic lanes at the upstream intersection at Bowen Bridge Road/Butterfield Street that feed the connection would have capacity to accommodate approximately 1,350 vph in the AM peak and 1,950 vph in the PM based on intersection modelling of forecast network demands.

The Changed Project capacity exceeds that provided for right turns at the Bowen Bridge Road/Northey Street intersection in the Reference Project to cater for NSBT and ICB traffic.

The detailed design of the northbound lane arrangements along Bowen Bridge Road directly north of Butterfield Street will be developed in consultation with BCC and will be designed in accordance with relevant BCC design guidelines.

4.2.5 Inner City Bypass

Submission

The submission is concerned that the Changed Project does not provide for the expected traffic demand or justify the reduction of the capacity of the ICB through Bowen Hills from two lanes to one lane each

direction to and from Kingsford Smith Drive and this is not supported. The proposed layout includes a trap lane arrangement that is not consistent with normal design approach. There is also no clear indication how bikes would be treated through this area.

Response

This is not a change from the Reference Project. It is noted that the NSBT Project provided for an efficient connection to the Airport Link Project and envisaged a single lane eastbound and westbound on the ICB when the future Airport Link Project was constructed.

The Changed Project infrastructure provides sufficient width to reinstate a continuous dual lane capacity of the ICB in the eastbound direction, should future traffic demands indicate this is necessary.

In the westbound direction, if the existing RNA tunnel is changed to operate as four running lanes then it would be possible to reinstate a continuous dual lane capacity of the ICB in the westbound direction, should future traffic demands indicate this is necessary.

Due to the complex nature of the road connections between the ICB, NSBT and Airport Link in the Bowen Hills interchange area, it is not regarded as an appropriate environment for cyclists, and no specific infrastructure within the connection area is proposed to accommodate bikes. Alternative cyclist routes exist outside of the interchange area.

4.2.6 Lutwyche Road tunnel portal effects on east-west connectivity

Submission

The submission is concerned as to what extent the new tunnel portal surfacing in the centre of Lutwyche Road to the north of Northey Street intersection will further sever and limit east-west connectivity between Northey Street and Federation Street. An appropriate mitigation response is required to address this impact.

Response

Lutwyche Road at present is a 6 lane arterial road carrying approximately 70,000 vehicles per day. Pedestrian and cycle crossings of Lutwyche Road are possible on the traffic signals at Newmarket Road, Federation Street and Northey Street. The location of the south-bound ramp in Lutwyche Road has no impact on crossings of Lutwyche Road, apart from the relocation of the Federation Street crossing to extended Gallway Street.

There are no changes in the level of east-west connectivity between Northey Street and the Federation Street precinct in the Changed Project.

Pedestrian and cycle crossings of Lutwyche Road would be incorporated at the traffic signals at Newmarket Road, Gallway Street and Northey Street. The location of the south-bound ramp in Lutwyche Road has no impact on crossings of Lutwyche Road, apart from the relocation of the Federation Street crossing to Gallway Street extended.

4.2.7 Effect of the Changed Project on the NSBT

Submissions

The submission has expressed concern regarding the ability for the NSBT connections to respond to actual demand requirements with connections (to the Airport Link) being restricted to one lane in each direction.

The submission is also concerned about the capacity of the connection to Lutwyche Road and trap lane arrangements to the ICB and the NSBT. The submission suggests that the normal design approach would be to have a traditional diverge, take two lanes past and then drop a lane.

Response

The Airport Link Changed Project provides connections to NSBT commensurate with the Reference Project's traffic capacity.

The Changed Project can accommodate a two lane connection to and from NSBT, without substantial structural works, should this be required.

4.2.8 Windsor East Access via Gallway Street

Submissions

The submission is concerned that the proposed right turn pocket at Windsor East (Gallway Street) does not provide sufficient long term capacity for this area and would result in significant safety and capacity issues if demand for the movement was to increase. It is considered likely that significant redevelopment would occur in this area in the future due to the proximity of the bus station. The long term arrangements for the precinct should be addressed as part of the Airport Link project.

Response

The access arrangements for the existing area are adequate.

The Lutwyche Road/Gallway Street intersection provides for all movements entry and exit to Gallway Street. It is noted that the right turn pocket on Lutwyche Road for turning movements from the south is of limited length (approximately 20 metres) due to geometric constraints and would only be able to cater for three stored vehicles.

Intersection modelling using SIDRA version 3.2 has been carried out for the 2022 AM and PM peak periods using strategic model forecasts of traffic demands as summarised in Table 3-6 of the Request for Project Change. This analysis indicated overall intersection performance would be within capacity, with Level of Service B in both peaks with a degree of saturation of 0.93 in the AM peak and 0.88 in the PM peak. In the text it was noted that the short right turn lane from the south was the critical movement at the intersection.

This assessment shows :

- For traffic demands associated with current local land use patterns, the turn slot would be adequate to accommodate the average queue length per cycle (20 metres in both peaks), however at a small percentage of times there may be overflow into the adjacent through lane.
- The right turn entry movement is forecast to experience the highest delays of any movement at the intersection. Average delays to right turn vehicles into Gallway Street are forecast as 75 seconds in the AM peak and 67 seconds in the PM peak, which are not regarded as excessive in an urban environment for the 10 year planning horizon.
- The overall level of service at the intersection (LOS B) and average delay to vehicles using the intersection was low (11 seconds in the AM peak and 17 seconds in the PM peak).

If redevelopment of this area occurs, consistent with an orderly land use and infrastructure planning approach, an alternative additional capacity for access to the area may need to be provided.

4.2.9 Opening of Swan Street to traffic

Submissions

The submission is that the local residents of Gordon Park do not want Swan Street made available to rat-runners seeking an alternative route to by-pass traffic on the main roads. The increased traffic in this street as a result of the connection to Gympie and Stafford Roads will have a negative impact on safety and amenity of the neighbourhood. Residents could continue to access Stafford Road via Rose Lane.

Response

The Changed Project arrangements for Airport Link and Northern Busway at the Gympie Road/Stafford Road intersection may create the potential for southbound right turning traffic from Gympie Road to Stafford Road to proceed to Swan Street. There is a need for a traffic management strategy to address local residents' concerns. The traffic management strategy will be developed in consultation the Department of Main Roads, BCC and Translink, and will include detail geometric design and signage of the Gympie Road/Stafford Road intersection.

4.2.10 Adequacy of Portal connections with State-controlled Roads

Submissions

Submissions have been raised regarding the portal connections to the connecting roads. In particular, adequacy in terms of geometry at Gympie Road northbound through Kedron (Stafford Road) has two lane drops in quick succession merging with the Airport Link exit two lanes to make up three though Gympie Road lanes (just prior to Gympie Road and Sadlier Street signalised intersection).

The submission has also expressed concern about the safe operation and the capacity of the outbound merge arrangements for general traffic, including the access to the local precinct and suggests consideration to closing Homebush and/or Broughton Street intersection(s). The submission has suggested a study be undertaken, including community consultation, as part of the Airport Link Project to address these concerns.

Change in design for connections to Stafford Road will lead to more extensive works with potential environmental and traffic impacts.

Response

Where it would connect with State-controlled roads, the Changed Project would provide greater capacity than the Reference Project. As part of the normal detailed design process, the concept designs tendered will be reviewed and tested against adequacy and required function. There will be ongoing consultation with stakeholders, including the Department of Main Roads and the BCC, during the detailed design phase.

In conjunction with BCC and the Department of Main Roads, consultation will be carried out with the local community regarding closure of Broughton and Homebush Roads.

4.2.11 Loss of the direct connection from Airport Link (east-west tunnel) to Lutwyche Road

Submissions

The Changed Project substitutes the southbound connection from Airport Link to Lutwyche Road at Kedron with a more indirect route involving west-bound tunnel traffic entering Stafford Road then proceeding to Lutwyche Road via Richmond Street and Bradshaw Street.

Response

The Changed Project replaces the connection via a signalised intersection in the vicinity of Kedron Park Road to Lutwyche Road for westbound traffic in the Reference Project with a grade-separated connection to Stafford Road allowing traffic destined for the Lutwyche precinct to use Richmond Street and Bradshaw Street. The key effects of this change are a small increase in the forecast traffic volumes on Stafford Road (east of Richmond Street) and Richmond Street/Bradshaw Street. These effects have been considered in Section 3.1.2 of the Request for Project Change.

4.2.12 Increased toll for heavy commercial vehicles (HCVs)

Submissions

It is not clear why the percentage of HCVs increase after increasing the toll for these vehicle types. Is this because the Changed Project removes more at grade intersections by introducing more grade separated turns and because this reduces delays, it attracts more HCVs and a higher premium can be charged?

Response

As stated on Section 3.1.2 of the Request for Project Change, the forecast percentage of HCV use of Airport Link decreases with the increased toll level.

The Changed Project is forecast to carry a slightly higher proportion (5%) of HCVs than the Reference Project (4%), because it provides more streamlined connections with the surface road network and offers improved travel conditions for commercial vehicles.

4.2.13 Demand for Airport Link

Submissions

The total Airport Link changes in traffic totals in Table 3-2 for 2012 are inconsistent with the sum of the changes in tunnel section volumes.

It should be noted that PIFU (2007) and NIEIR (2008) did not use the 2006 Census data, but was based on the 2001 Census supplemented with other post-2001 sources. The 2016 and 2026 population figures reported in the Request for Project Change Report match what QT has derived from OUM supplied data, but 2016 and 2026 employment figures less (i.e. 2016 figures in the order of 35,000-45,000 less than what QT derives, and 2026 figures in order of 55,000 and 120,000 less). Difference may be due to use of older NIEIR data. Anomaly should be brought to attention of and verified by the Department of Infrastructure and Planning as authority on PIFU and NIEIR data. A potential implication of incorrect data may be that the benefits of the Airport Link are understated. However, demographic assumptions the same for Reference Project and Changed Project models so should not significantly change conclusions drawn comparing the two projects.

Response

The submission was correct in that the figures were found to contain an error. The figures in Table 3-2 for 2012 (and also for the same Table 4-1 in the Traffic and Transport Technical Report) have been corrected and no inconsistency now remains. The correction has no impact on the conclusions made in the Request for Project Change.

The EIS comparisons in the table relate to the cumulative Airport Link and Northern Busway scenario and are drawn from the scenario described in Section 21.2.1 in Part C of the Airport Link EIS, as clarified in the Technical Report, however the 2012 numbers in the table now exclude the initial ramp up identified in that section of the EIS. The amended table is shown below with the amended numbers in bold.

Table 3 – Reference Project & Changed Project – changes in Airport Link usage

Location	Change in Average Weekday Traffic (% change from EIS)	
	Reference Project	Changed Project*
2012		
North-South Tunnel	+ 2,200 (3%)	+3,500 (5%)
East-West Tunnel	-2,700 (-12%)	+200 (1%)
Total Airport Link	-500 (-1%)	+3,700 (4%)
2026		
North-South Tunnel	+5,000 (5%)	+7,600 (8%)
East-West Tunnel	-3,000 (-12%)	-900 (-3%)
Total Airport Link	+2,000 (2%)	+6,700 (6%)

* Change Project forecasts are based on the upgraded Airport Link traffic model derived from the BSTM.

4.2.14 Traffic volume effects

Submissions

Some of the results in Table 3-4 on page 40 seem counter intuitive. For example, why would the 2026 ICB (west of Bowen Bridge Road) have less traffic on it with Airport Link than without Airport Link when in 2012 it has more on it? This is particularly perplexing when updated BSTM-based model would have the ICB directly fed by the Northern Link and the Hale St Link.

Capacity of intersections at Gympie/ Stafford Roads, Lutwyche/ Kedron Roads and Sandgate/ East West Arterial Roads to provide network and Airport Link operations, as well as capacity for diversion and segment incident impacts and closures has not been demonstrated. Infrastructure layouts do not ensure operational performance and suggest reduced capacity at some locations.

Response

As noted in Section 3.1.1 of the Request for Project Change, the Northern Link project has been included in the base future networks in the transport model from 2016. The 2026 model findings (as compared to the 2012) reflect a different pattern with regard to changes in traffic volumes on the ICB west of Bowen Bridge due to the influence of changed travel patterns on the ICB with Northern Link and without Airport Link (ie the Do Minimum case), and with Northern Link and with Airport Link (the Project Case). The combination of Airport Link with NSBT in the 2026 Project Case (for both Reference Project and Changed Project) provides a more attractive alternative travel route for some cross-river trips using Centenary Motorway-

Western Freeway-Northern Link-ICB or Hale Street Link-ICB route in the Do Minimum Case. As a result the model forecasts a negligible change in traffic on the ICB west of Bowen Bridge Road in 2026.

The capacity of the intersections at Gympie/ Stafford Roads, Lutwyche/ Kedron Park Roads and Sandgate/ East West Arterial Roads to provide network and Airport Link operations has been assessed and is summarised in Table 3-6 of the Request for Project Change. This table demonstrates that the performance of the Gympie/ Stafford Roads, Lutwyche/ Kedron Park Roads intersections with the Changed Project is better than forecast in the EIS with the Reference Project. At the Sandgate Road/East West Arterial Road intersection the level of service forecast with the Changed Project is similar to the EIS forecast of intersection performance.

4.2.15 Pedestrian and cycle path design

Submission

The submission requests that many of the issues (also raised on the Reference Project) regarding the level of detailed design provided to assess impacts on active transport (cycling and pedestrian), including impact on key routes, linkages and connections, alternatives and temporary diversions and design standards, would need to be addressed with QT during the detailed design phase of the Project.

Proposed pedestrian access for residents to and from the eastern side of Gympie Road to the Kedron Busway Station is both unsafe and impractical.

Pedestrian and cycle access across Melton Road is currently hazardous but is not addressed in this proposal.

Report should include maps showing cycle network and resultant changes.

Response

As proposed by the submission, detailed issues relating to impacts on active transport, including access across Melton Road will be addressed during detailed design in consultation with QT and affected stakeholders.

The pedestrian access to and from the eastern side of Gympie Road to the Kedron Busway Station is unchanged from the Reference Design and meets the appropriate design standards.

In addition, the Coordinator-General's Conditions in Schedule 3, Condition 5(b) require that the construction traffic EMP Sub-Plan must address the city-wide and local implications of surface construction works for, amongst other things, public transport, pedestrian and cyclist safety.

4.3 Air Quality

4.3.1 Air quality modelling and health impacts

Submission

Statements in the EIS about surface roads and tunnels and tunnel filtration are moot points and are general opinions held by practitioners working in area of air modelling. Qld EPA do not list "approved" air dispersion models in the Environmental Protection Policy (Air) (1997). Major flaw presented in air modelling scenario. Queensland Government must act responsibly in a manner that prudent avoidance is required to prevent detrimental public health occurring as result of harmful polluting particulates being emitted from the tunnel ventilation outlets. State has an "environmental duty of care" to protect people from harmful micro-particulates emitted from ventilation outlets.

Concern that medical references to fine particulates, air pollution and the link with cardiovascular and respiratory diseases are not cited in the air quality reports even though copy was provided to Community Consultation Team. Serious dangers to public health from ultra-fine particulates and fine particulates.

Response

The overall approach taken in the EIS to the air quality impact assessment was addressed by the Queensland EPA and found to be appropriate and reflecting contemporary practice. The EPA went on to say that the results were reasonable. The input data and assumptions in the modelling also was considered to be reasonable and appropriate. Queensland Health concluded in its assessment that based on the air quality findings, the ongoing use of Airport Link would not result in an unacceptable increase in health risk to the community from the expected small increase in air pollution levels (refer EIS Supplementary Report, Appendix A - Summary of Submissions).

Papers provided with the submission have been reviewed. None of those papers introduced material that would change the recommendations presented in the EIS or in the Request for Project Change.

4.3.2 Air quality monitoring

Submissions

Currently, no air quality monitoring is proposed for surface level traffic in the vicinity of the Kedron residential area adjacent to the transition structures, or from the ventilation outlets. This is not acceptable and needs to be addressed. Possible congestion will occur in peak hours as vehicles exit and enter Airport Link, potentially resulting in air pollution on surface roads as well as from the ventilation outlet.

Response

The Coordinator-General's Conditions require that two air quality monitoring stations be established near each ventilation outlet for the tunnel ventilation system not less than 12 months before the commencement of tunnel operations. These sites would be established to complement the existing EPA network. The Coordinator-General's condition 19(k) also specifies on-going monitoring of ambient air quality must be conducted at two monitoring stations for each ventilation outlet. The monitoring stations would also detect dispersed pollution contributions from the surface road network impacting on the ambient air environment.

The monitoring stations must be located within 500m of each ventilation outlet. The preferred location for one of the north-eastern ventilation outlet monitoring station sites is in Kalinga Park. For the north-western ventilation outlet, the preferred location for one monitoring station is in the campus of KSHS. For the southern ventilation outlet, the preferred location for one monitoring station is Eildon Hill reservoir, Constitution Road, Windsor, despite being located more than 500m from the ventilation outlet. Monitoring parameters must be consistent with the air quality goals set out in the Coordinator General's conditions. The air quality monitoring stations proposed for the Reference Project remain appropriate for the Changed Project.

As with the Reference Project, no air quality monitoring is proposed in the transition structures for the Changed Project. The ventilation system for the Changed Project is able to operate in a manner which would minimise portal emissions. Transition structures for both the Reference Project and the Changed Project would be situated away from sensitive receptors and within surface roads. Monitoring of air quality in the transition structures would be difficult to distinguish between contributions of pollutants from the

transition structures and traffic on the adjacent surface roads. Modelling of pollution levels on surface roads at a range of distances from the kerb indicate ambient goals are able to be achieved.

4.3.3 Details of Ventilation outlet at Byrne Street

Submission

The submission seeks more information regarding the location and details of the ventilation stack located at Byrne Street.

Response

The location of the ventilation station at Byrne Street is as shown in Figure 2 of the Request for Project Change.

Concept drawings of the proposed ventilation station and outlet are shown in Figures 3.5, 3.6 and 3.16 of the Request for Project Change.

4.3.4 Requirement for air filtration from the Changed Project

Submission

Failure to include filtration of the emissions is unacceptable. Adverse impact on student health may not be realised for many years while effect accumulates. Knowing that this risk exists and not appropriately addressed it will have serious consequences for those impacted, and for decision makers approving the project.

As there is no exact science in air modelling, the Queensland Government must act responsibly by adopting prudent avoidance to prevent detrimental public health impacts due to tunnel ventilation emissions. The State has a duty of care to protect people from harmful micro-particles.

Recommended that electrostatic precipitation filters be installed on all tunnel ventilation outlets. In doing so, State would act in a responsible manner and its "environmental duty of care" would be conducted.

The submission claims that a study reported in 1999 resulted in an electrostatic filter being installed in the Neville Bonner building due to indoor health concerns as well as preventing a child care centre being included within the precinct as a prudent avoidance measure.

The submission claims that filtering of ventilation outlets is being trialled in Sydney and consideration should be given to trialling this for Airport Link.

Response

The Changed Project does not require a change from the Reference Project with respect to filtration of the ventilation system. The ventilation system for the Changed Project is based on the same, very conservative approach taken with the Reference Project and would lead to the same overall outcomes in terms of impacts on ambient air quality. No change is proposed nor required to the stringent goals adopted and imposed on the Reference Project for the design and operation of the ventilation system and its potential to impact on ambient air quality. Both the Queensland Environment Protection Agency and Queensland Health have considered the approach and the findings of the air quality assessment and accepted both for the Reference Project.

The overall approach taken to air quality impact assessment in the EIS was addressed by the Queensland EPA and found to be appropriate and reflecting contemporary practice. The EPA went on to say that the

results were reasonable. The input data and assumptions in the modelling also was reasonable and appropriate. Queensland Health concluded in its assessment that based on the air quality findings, the ongoing use of Airport Link would not result in an unacceptable increase in health issues to the community from the expected small increase in air pollution levels. (Refer EIS Supplementary Report - Appendix A Summary of Submissions).

As for the Reference Project, the ventilation stations have been designed to make provision for future air filtration as required by Schedule 3, Condition 19(d) of the Coordinator-General's Conditions.

The EIS assessment, and subsequently the Coordinator-General's Conditions, adopted the Ambient Air Quality National Environmental Protection Measure (NEPM) goals either where there is no EPA standards or where the NEPM goals are more stringent than the EPA criteria.

The Ambient Air Quality NEPM was introduced in 1998 by the National Environment Protection Council and provides the national ambient air quality goals for air pollutants to which most Australians are exposed. In Queensland there are also Environmental Protection (Air) Policy 1997 air quality goals relating to human health, which are similar to the Ambient Air Quality NEPMs. The Ambient Air Quality NEPM goals were set after consideration of the health effects of these pollutants.

The EIS (Volume 3, Technical Report 5A, Sections 4.3 and 9.4) presented an analysis of the comparative effects with and without filtration for both particulate matter (PM₁₀ or smaller) and oxides of nitrogen.

The EIS addressed the potential changes in ground level concentrations for a range of pollutants of concern, including particles. The EIS, including the Technical Studies, considered the potential changes in concentrations for PM₁₀ and PM_{2.5}. A discussion on ultra-fine particles (PM_{0.1}) was also provided. Modelling of ambient air quality with Airport Link, and with and without filtration of Airport Link ventilation outlets, indicates there would be little change in ground-level concentration for the pollutants of concern. Consequently, there would be little benefit, if any, from fitting and operating filtration systems when considering beneficial changes to community health. The EIS found that any benefits of filtration of the ventilation system emissions would be lost against the background pollution load contributed primarily by the surface road network. None of the papers provided in the submission introduced material that would change the recommendations presented in the EIS or in the Request for Project Change.

4.3.5 Air quality effects in the residential areas of Windsor

Submissions

The submission expresses concern about operational air quality impacts in the Windsor area.

Response

The Changed Project would relocate the Windsor ventilation outlet approximately 50 metres to the south-east of the position nominated in the Reference Project. Analysis presented in the Request for Project Change (Technical Attachments 2 - Review of Air Quality Issues - Holmes Air Sciences, May 2008) shows that the 'worst case' contributions to ground level concentrations of pollutants of concern would be well within the air quality goals established by the Coordinator-General. The conclusion drawn from this analysis is that the impacts of the ventilation outlets on changes to ambient air quality at any given location would be minor, especially when these changes are considered against the required air quality goals. The proposed parameters are well within those that are likely to achieve compliance with air quality goals.

An air quality monitoring station is required by the Air Quality EMP (Operations) to be established near each ventilation outlet for the tunnel ventilation system not less than 12 months before the commencement of tunnel operations. These sites would be established to determine ambient air quality and to complement the existing EPA network. The Coordinator-General's Conditions Schedule 3, Condition 19(k) specifies on-going monitoring of ambient air quality must be conducted at two monitoring stations for each ventilation outlet. Monitoring parameters must be consistent with the air quality goals set out in the Coordinator-General's conditions.

4.3.6 Air quality effects in Kalinga

Submissions

Lack of air quality data is a significant gap in the proponent's ability to address community concerns about air quality impacts. Suggest that the monitoring station commence immediately with installation before major work begins in 2008, in order to provide Kalinga Park air quality baseline data.

Response

This issue does not arise as a consequence of the Changed Project.

The EIS presented a soundly-based analysis of existing ambient air quality and predicted impacts upon air quality of the operation of the ventilation system for Airport Link in the worst-case scenario (ie a congested tunnel system). The EIS relied upon monitoring data from sites operated by the Queensland EPA at Eagle Farm (discontinued) and at Pinkenba, as well as sites established for fixed-term monitoring at Bowen Hills and Kedron. The use of such data was accepted by the EPA as being representative of the existing environment, leading to soundly-based conclusions in relation to predicted air quality impacts.

The Coordinator-General's conditions (refer Schedule 3, condition 8 – Construction Air Quality and condition 19 – Operational Air Quality) require the establishment of air quality monitoring stations. For the construction phase, monitoring is required to establish baseline data and to determine performance against the goals. For the operational phase, monitoring is required to be established as soon as practicable but at least 12 month prior to the commencement of operations of the ventilation system.

The locations of the monitoring stations are to be determined in consultation with the proponent and the Queensland EPA. This approach is considered appropriate and sufficient for addressing potential impacts, agency requirements and community concerns.

4.3.7 Ventilation Station Outlet at Clayfield

Submissions

There is some concern that funding to address the Airport Roundabout issues has diverted from providing a more sustainable solution to the Clayfield stack location.

The Changed Project recommendations for the stack location and fan complex in Alma Road are welcomed by residents in Alma Road (i.e. removal of industrial fan complex, reduction of outlet stack size). The submission is concerned that bidders were constrained in their ability respond to the reference design, as the location did not reflect community concerns expressed over several years.

The ventilation outlet should be moved further away to the industrial areas on the East-West Arterial.

Response

The location of the Clayfield ventilation station outlet has not changed from the Reference Project and responds to a range of design and operational requirements for the project. There is no relationship between the Airport Roundabout Upgrade Project and the location of the Clayfield ventilation station and outlet.

The Changed Project has responded to the Coordinator-General's recommendations for innovation to further mitigate the visual and community impacts of the associated with the location of the ventilation station and outlet at Clayfield in a manner which complies with the air quality, noise, safety, reasonable cost, traffic accessibility and flood impact objectives of the project.

The submission's proposal to locate the ventilation outlet further away in industrial areas would also give rise to construction and operational impacts so as to make the proposal impractical and unsustainable (eg tunnelling from the extraction point at Clayfield to the outlet, significant increases in energy demands and greenhouse impacts during operations).

4.3.8 Greenhouse

Submissions

Submissions suggest that the greenhouse gas report does not provide detail on how energy consumption figures were obtained for the Reference Project or how the Changed Project could differ. It appears that the Changed Project offers benefits in terms of road network operational greenhouse emissions compared to the Reference Project. Operational greenhouse gas emissions are significantly higher than construction emissions and significantly higher for the Changed Project, compared to the Reference Project. No reason for these differences is given. The report does not quantify the likely quantum of the offset due to reduced congestion. It is recommended that the report take this into account.

Response

The operational greenhouse gas emissions are greater than the Reference Project because of the length of tunnel that requires ventilation, and the predicted higher usage of the infrastructure. The increase in operational greenhouse will be offset by reductions in emissions from the surface road network because of the Airport Link Project.

4.4 Noise and Vibration

4.4.1 Open mainline tunnel portal west of Sandgate Road

Submissions

The submission requests that the main tunnel exit on the Kalinga Park side of Sandgate Road be covered so that the noise of motorway traffic travelling at high speed will be reduced for residents living on Alma Road.

Response

Analysis presented in the Request for Project Change shows that the redesign of the Clayfield connections will achieve the noise criterion of $63\text{dBA}_{\text{LA10(18hr)}}$ for new roads with noise barriers 2-5m high, compared

with barriers of 4m-8m for the Reference Project. Therefore, covering of the main tunnel exit is not required to achieve the noise criterion established in the Coordinator-General's conditions.

By burying the ventilation station at Clayfield, the Changed Project would present an improved urban design and landscape outcome compared to the Reference Project. Instead of noise mitigation for the Sandgate Road on-ramps being provided by the ventilation station at a height of 15m and noise barriers up to 8m in height, the Changed Project provides for a landscaped green space incorporating noise barriers adjacent to the traffic lanes to a maximum height of 5m and separated from residential premises. The Request for Project Change provides graphic representations of this urban design outcome in Figures 3-14 and 3-15.

4.4.2 Operational noise criteria

Submissions

Submissions suggest that operational noise criteria should not include the 'status quo'. For State-controlled roads, investigation, assessment and noise barrier design should be undertaken in accordance with the 'Road traffic noise management code of practice 2008'. A noise attenuation strategy should be put in place to achieve the 63/68 dB(A) L10 (18h) criterion levels, not just the 'status quo'. Where compliance with these criteria is not cost-effective, technically feasible, or does not suit the streetscape/ built environment, consideration should be given to going outside the road corridor (i.e. in-house treatments/architectural treatments).

Recommendations and conclusions should include a section on post-construction monitoring of operational noise (i.e. within 12 months and 2022). Report does not identify the impact on the Consortium if the criteria are not achieved.

Recommendations and conclusions for construction noise and vibration should include a complaints management strategy.

Changes to the alignment of the mainline tunnels will have significant impact on the noise and vibration experienced by residents above the areas of the tunnels when the tunnels come into operation. Report does not address these issues.

Concern about operational noise from increased traffic on Stafford and Gympie Roads and from car park/tunnel entry, and possible need for double glazing on windows.

Response

With regards the noise criteria for road traffic noise established in the Coordinator-General's report, there is nothing in the Changed Project warranting a change to the conditions or the criteria.

The Coordinator-General's Conditions (Schedule 3, Condition 20 (e)) provide a stringent and yet reasonable and practical approach to mitigating the effects of road traffic noise emanating from the Airport Link Project. The conditions provide a reasonable and effective balance between the need to protect the receiving urban area from road traffic noise and the impacts of noise attenuation measures. A departure from this approach would lead to a range of impacts on urban amenity, safety and visual context which were not consulted upon in the EIS and which may not be acceptable to the community and individual property owners.

Off-road mitigation measures, such as architectural treatments to properties, were not imposed on the Reference Project, and are neither appropriate nor required for the Changed Project.

The Changed Project does not give rise to a requirement for additional noise attenuation measures over those required for the Reference Project. In some locations, the Changed Project would lead to a reduction in road traffic noise through design measures, and in turn, would lead to a reduction in the height of noise barriers required in some locations (eg the Clayfield ramps). These findings are based on the changed predictions for traffic flows on both the surface road network and within the Changed Project (refer to the Request for Project Change – Technical Attachments, Report 3 – Noise and Vibration, Heggies Pty Ltd).

As described in the Request for Project Change, and consistent with the Reference Project, no noise or vibration operational impacts are predicted for the tunnel sections of the Changed Project, and therefore the changes in alignment will have no changed noise and vibration effect for properties above the tunnel alignment.

4.4.3 Noise impacts - Gympie Road

Submissions

Relocation of the eastern boundary of Gympie Road between Stafford Road and Park Terrace will result in four lanes of traffic travelling on land currently occupied by residential and commercial properties, generating increased noise and air pollution. Three metre high earth or perspex noise walls should be constructed on northern and eastern boundaries of properties to reduce noise impacts.

Current plans do not include provision for noise walls to reduce the impact on residents.

Response

The potential impacts of road traffic noise from the Changed Project resulting from the removal of buildings along the eastern side of Gympie Road was considered in the Request for Project Change (refer to the Request for Project Change – Technical Attachments, Report 3 – Noise and Vibration, section 3.2, p11, Heggies Pty Ltd).

The investigations found that, whereas for the Reference Project² noise barriers ranging from 2.0m to 6.5m in height would be required in this location, for the Changed Project reductions in barrier height would achieve the planning goal of 63 dBA LA10 (18hr) in accordance with the Coordinator-General's conditions. The revised barrier height would be in the range of 1.5m to 3.0m and would reduce significantly the potential visual impact and the impact on urban amenity of the barriers required for the Reference Project.

² Refer to EIS, Vol 3, Technical Report 6 – Noise and Vibration, Heggies Pty Ltd, Appendix K – Gympie Road Year 2026, 63 dBA

4.5 Flora and Fauna

4.5.1 Clearing of habitat

Submissions

Kalinga/Ross Park includes excellent roosting and nesting sites. Gradual clearing of habitat should be taken so that animals have time to move on, and nocturnal animals should be moved over a period of weeks not just the night before clearing commences.

Response

The Coordinator-General's Conditions (Schedule 3, Condition 4) require that a comprehensive Construction EMP must be prepared and implemented and developed generally in accordance with the Draft Outline EMP in Chapter 19 of the EIS. The condition requires that the environmental objectives and performance criteria in Chapter 19 of the EIS be adopted and incorporated. The Construction EMP will include procedures for clearing of any habitat areas.

The environmental objectives and performance criteria in the flora and fauna draft outline EMP include:

- maintaining ecological and habitat values;
- minimising and rehabilitating construction impacts on native flora and fauna.

4.6 Land Use and Planning

4.6.1 Draft Neighbourhood Plan

Submissions

BCC will be required to undertake further targeted consultation in relation to the draft Neighbourhood Plan due to Airport Link and Northern Busway and make consequential changes to the draft Plan. Suggested that this should be noted in the consideration of the Request for Project Change Report.

Due to their temporal nature, BCC are not of the view that the proposed work sites present a challenge to the long term achievement of urban development outcomes of the draft Neighbourhood Plan.

Response

BCC was consulted on future land use of the Airport Link project during preparation of the EIS with regards potential impacts. This consultation was cognisant of the Council's work on the draft neighbourhood plan, to the extent that members of the Council's planning team attended community information sessions about Airport Link.

The Changed Project does not impact differently to the Reference Project on the achievement of land use intentions for Windsor. The Changed Project would create a potential development site on the corner of Gallway Street (extended) and Lutwyche Road. Any future development of this site would need to be coordinated with and cognisant of the height of the ventilation outlet to avoid the potential to impact on the behaviour of the plume from that facility.

4.6.2 Land tenure

Submissions

With regard to the Changed Project, the intent of the project should not only be to construct a system of road tunnels, busways and bridges but also to provide tenures that are most appropriate for the efficient administration of this infrastructure. Where land acquired for construction purposes is intended to be dealt with as surplus, the intent of the project should also be to ensure the allocation of an appropriate tenure for the surplus land. That allocation should be made in consultation with NRW.

Tenure over a watercourse will not be created under the Land Act where the construction and maintenance of transport infrastructure may be authorised under another Act. With regard to the constructed bridge, the State may safeguard the protection of the affected waterway.

Response

This issue does not arise as a consequence of the Changed Project.

Consultation will occur with NRW to establish the most appropriate and efficient tenure.

4.7 Heritage

4.7.1 Kalinga Park and Diggers Drive

Submission

Kalinga Park including Diggers Drive has been entered in the Queensland Heritage Register and in the Brisbane City Plan Register. The submission expresses concerns regarding the section of Diggers Drive east of the Sandgate Railway. The submission has proposed, as previously discussed with the Airport Link Project Team, that the new bikeway should follow the original alignment of Diggers Drive, east of the railway, to a point close to Sandgate Road bridge across Schulz Canal (Kedron Brook) before crossing the canal by a pedestrian and cycle bridge to connect with Ross Park and Centro Toombul Shopping Centre. In the Changed Project, a bridge is proposed close to the railway and no re-instatement of the eastern end of the Drive is proposed. The submission believes that because of its heritage and cultural significance, as much as possible of the original Diggers Drive should be preserved and a bridge should be included adjacent to Sandgate Road. The submission also proposes that a set of stone or concrete steps and ramp for the disabled be built from the Sandgate Road/Airport Link intersection, to form an eastern entrance to Kalinga Park.

Response

An application was made by the State to the Queensland Heritage Council (QHC) on 22 October 2007 for development in Kalinga Park based on the Airport Link Reference Project and a Preliminary Conservation Management Plan (PCMP). A Notice of Recommendation from the Queensland Heritage Council was received on 23 January 2008 by the Deputy Premier & Minister for Infrastructure and Planning advising of a recommendation that the temporary and permanent works associated with the construction of the Airport Link Project, proceed in accordance with the application and associated conditions considered by the Queensland Heritage Council as necessary to protect the cultural heritage values of Kalinga Park.

A further application by the State of Queensland to seek an amended Notice of Recommendation from the QHC for changes to the Airport Link Reference Project works has been made for their mid July 2008 meeting.

The proposed development design and project delivery changes with respect to Kalinga Park are:

- Project delivery changes to the required construction worksite boundary and associated construction activities;
- Design changes to the permanent alignment of the Eagle Junction Creek drainage channel through Kalinga Park including temporary trenching through Diggers Drive for the placement of culverts and the removal of a single tree south of Diggers Drive and within the Diggers Drive Precinct;
- Design changes to the Sandgate Road connecting ramps and the mainline tunnel portal; and
- Design changes to the proposed landscape masterplan and associated landscape treatments;

The change to the area of the construction worksite between the north-coast railway line and the Airtrain impacts directly on the Kedron Brook and Pathway Precinct identified in the PCMP. There is no impact however in respect to the Conservation Policies associated with this precinct. The 300 year old ironbark will remain identified as an item of high cultural heritage significance and would be protected and retained by the Changed Project.

The change does not impact on any of the Conservation Policies associated with the Kedron Brook and Pathway Precinct, nor does it impact on the Park East Precinct or the Diggers Drive East Precinct, any further than already identified in the Reference Project and as provided for in the Conservation Policies associated with these Precincts. All of these associated policies are capable of being met by the Changed Project.

The change to the area of the construction worksite to the west of the railway is contained within the Sports Precinct and avoids any intrusion into the Diggers Drive West Precinct. The change to the construction worksite will have no impact on the Conservation Policies associated with the Sports Precinct. A particular benefit from the Changed Project within this precinct is the potential to reinstate the majority of this area following the launching of the TBMs, rather than at the end of construction with the potential to bring forward the commencement of reinstatement by approximately 2 years.

The change to the alignment of the drainage channel directly impacts on the Diggers Drive West Precinct of the PCMP. In relation to the temporary trenching through Diggers Drive West, no permanent change to the surface of Diggers Drive West is proposed and there will be no impact on the alignment of Diggers Drive West from the Changed Project.

The temporary impact on Policy 45 such that Diggers Drive would have vehicular use restricted during construction of the trench and its associated reinstatement is not considered to have a significant impact on the cultural heritage value of the Park.

The tree under consideration is not one of the original Memorial plantings of the 1920's. Given that the QHC has recommended the works proceed to remove similar mature trees from the Park East Precinct, it is considered that the loss of a single tree from the Diggers Drive West Precinct, with similar cultural heritage values, would not destroy or substantially reduce the cultural heritage significance of Kalinga Park.

In relation to the major design changes affecting Kalinga Park associated with the changes to the surface connections and location of the tunnel portal, the Changed Project remains generally in accordance with the documents submitted on the original application of October 2007. A Heritage Landscape Master Plan, as referenced in Sections 6.3 and 6.4 with associated policies, is yet to be undertaken for the Changed Project. The landscape master plan submitted for the Changed Project by BC remains a concept plan and will be

further developed in accordance with the policies and guidelines presented in the Preliminary Conservation Management Plan for Kalinga Park. These policies include reconstruction of Diggers Drive East. Policy 15 states “*Design and rehabilitation for the Diggers Drive East Precinct should be completed as part of a suitable Heritage Landscape Master Plan for the park*”. Policy 16 states: *Reconstruction of and accessibility to a small part of Diggers Drive east of the rail line is acceptable and desirable to the parks heritage interpretation potentials. In any reconstruction of part of Diggers Drive, heritage design aspects include:*

- *Formation of a drive to the same width, and with a gravel surface on road base, or similar;*
- *Planting of the appropriate species of trees as planted for Diggers Drive, in a similar spacing and relation to the drive;*
- *Pedestrian and cycle use accommodated, avoiding if possible a separate pathway to be constructed;*
- *Roofed structures, which are not associated with the project, should not be erected near this drive reconstruction; and*
- *Reconstruction, including interpretive signage should be prepared in direct consultation with the BCC Heritage Unit.*

The requested provision for stone steps and ramp from the Sandgate Road intersection and the further bridge across Schulz Canal should also be addressed through the design and development stage of the Heritage Landscape Master Plan required for the Project.

4.7.2 Aboriginal Cultural Heritage

Submissions

The relevant Aboriginal Cultural Heritage Management Plan must be updated to include the proposed conveyor route. This should include a search within the Aboriginal Cultural Heritage Database and the Aboriginal Cultural Heritage Register.

Response

Agreed. This is currently being undertaken by the State.

4.7.3 Cultural Heritage

Submissions

The submission identified limited cultural heritage impacts, particularly in relation to the removal of buildings at 12 Federation Street identified as “Nyamber”, and the area formerly known as the Swan Hill Residential Estate. Continued monitoring of cultural heritage impacts is strongly endorsed, as is ongoing liaison with the relevant native title claimants.

Response

Noted and agreed as provided within the Cultural Heritage Management Plans.

4.8 Social Environment

4.8.1 Provision for homeless people

Submissions

Proposed open space areas are inaccessible and will suffer from underutilisation and safety issues. Potential attraction of these areas to the homeless population needs to be planned for in terms of facility provision. Isolated open space along Enoggera Creek at Horace Street is highly likely to attract homeless people. Appropriate locally available facilities (e.g. crisis accommodation, safe place, meals, showering and storage) and services (e.g. legal counselling, financial and health) will be required to support the needs of homeless people in this location. Safety in rough sleeping will need to be assured.

Response

This issue does not arise as a consequence of the Changed Project

Compared to the Reference Project, the Changed Project presents no increased risk to homeless people. This issue should be addressed through implementation of documented and relevant Government policies and programs.

4.8.2 Effect of the Changed Project on local residents

Submissions

Submissions have been made contending that land values will decrease due to the proximity to the (Clayfield) ventilation stack, increase in traffic passing house, and impact on quality of life, and fallout of exhaust particulates. The submission suggests the following remedies to mitigate impacts:

- air-conditioning throughout home to minimise dust during construction and emissions from ventilation stack;
- annual financial contribution for running cost of air-conditioning;
- double glazed windows to alleviate noise during construction phase and operation;
- clear, see through sound barriers along southern side of East West Arterial to replace current ineffective wooden sound barriers;
- external walls of house washed monthly during construction to remove dust and roof cleaned at end of construction phase;
- filtration system installed on ventilation stack minimise impact of exhaust particles on surrounding residential area and environment;
- financial compensation for devaluation of my land by having ventilation stack within 300m.

Response

This issue does not arise as a consequence of the Changed Project

The predicted impacts on air quality of the Reference Project and the Changed Project have been documented respectively in the EIS, the EIS Response to Submissions, the Request for Project Change and the Request for Project Change Response to Submissions. None of the measures sought in the submission are warranted as a consequence of the predicted impacts of the Changed Project on ambient air quality.

Similarly, both the Reference Project and the Changed Project propose measures for mitigating road traffic noise emanating from the project at the connections with the East West Arterial and with Sandgate Road.

Any claim for compensation arising from the Changed Project would need to be addressed and processed in accordance with the *Acquisition of Land Act 1967*. There is no warrant for compensation arising from proximity to the Changed Project.

4.9 Urban Design and Visual Environment

4.9.1 Visual impact of the Clayfield Ventilation Station Outlet

Submissions

Submissions suggest that the construction of an 8-storey stack in predominantly tin and timber low density residential community will continue to draw ongoing community concerns for both proponents and operators of Airport Link. Those concerns only escalate when the stack is built and towers over homes for several kilometres in Clayfield and Hendra. No amount of urban design will hide the stack because it is so out of character with surrounding community.

Response

This issue was raised in response to the Reference Project and led the Coordinator-General to recommend that the Proponent “... *seek innovation aimed at further mitigating the risk of potential visual and private property impacts of ventilation stations and outlets, in a manner which complies with the air quality, noise, safety, reasonable cost, traffic accessibility and flood impact objectives of the Project.*”³ The Coordinator-General’s conditions (ref Schedule 3, condition 19(e)) also provide for the reduction in height of the Clayfield ventilation outlet in response to community concerns a out visual impacts.

The Changed Project proposes a reduction in the height of the Clayfield ventilation outlet from 30m to 25m. The Changed Project also proposes high-quality urban design treatments of the structure which would minimise the visual impact on the residential areas north and south of the site. The visual impact on residential areas in Hendra are off-set by the increased separation distances to available vantage points, of which there are few if any in proximity to the site.

4.9.2 CPTED issues associated with the proposed pedestrian and cycle network

Submissions

The submission suggests that the Request for Project Change Report gives inadequate attention to CPTED principles in association with the pedestrian and cycle network. The submission is concerned that:

- there remain a number of CPTED issues associated with the proposed pedestrian and cycle network;
- the main pedestrian/cycle link passes through very isolated area near Enoggera Creek at Horace Street through to Federation Street;
- paths passing beneath the series of overpasses would offer reduced amenity, exacerbating users' perceptions of poor safety, and affecting use of facility.

³ Coordinator-General’s Report of 23 May 2007, section 6 – Recommendations, Recommendation 4, p30

The submissions suggests that the pedestrian/cycle link across Enoggera Creek to the urban area across from the RBH should promote pedestrian access along Bowen Bridge Road as the dominant after-hours route. Direct pedestrian/cycle connection should be provided to the bus station at Northey Street. The submission suggests that a safety audit be conducted along the pedestrian/cycle route with application of CPTED principles.

Response

The Changed Project makes provision for alternative pedestrian and cycle routes through the Windsor East area, including:

- routes through and beneath the road infrastructure adjacent to Enoggera Creek to connect with links back to Bowen Park;
- routes to the north of the road infrastructure, through the newly-created landscaped open space adjacent to the ventilation station to connect with the interim busway station at Federation Street and with in-corridor pedestrian and cycle links along Lutwyche Road. The more desirable of these would be located on the western side of Lutwyche Road, connecting with a new pedestrian and cycle bridge to be constructed over Enoggera Creek as part of the Changed Project.

Such alternative routes address the CPTED concerns raised in this submission.

4.9.3 Open Space

Submissions

The submission requests consultation with BCC as part of the detailed design process for restitution of BCC parks and open space impacted by construction sites and development of new parks. All parks returned to BCC should be designed to BCC design standards including Park Planning and Design Code. The area identified at Gympie Road north of Stafford Road precinct does not meet BCC's location requirements for parks and is not supported for use as a park, but does provide an opportunity for a landscaped buffer.

BCC is concerned that there is an overall net loss in park land resulting from the Project. There are a number of opportunities of State-owned parcels that could be dedicated to Council for open space to offset loss of public park including:

- 3-23 Addison Street Windsor to enhance the open space along Enoggera Creek;
- Grafton Street, Windsor to add to Windsor Park; and
- Gennon and Albany streets, Windsor to create an open space network along Enoggera Creek.

Recommend that the area of rehabilitation between Sandgate and Melton roads be maximised, particularly on the northern side of Schulz Canal, where it should extend at least to the alignment of the Airtrain towers.

Response

Airport Link will return the parks to Council in an equivalent or better state than existed prior to occupation by the Airport Link. BC would provide changes requested by BCC Parks during the detailed design process provided the changes do not increase project costs. Landscaped buffers not returned to BCC would be maintained by the tollroad operator during the life of the franchise.

There is no net loss of parkland arising from the Reference Project or the Changed Project.

The Changed Project does not lead to a requirement for additional public open space over that for the Reference Project. The Changed Project, as with the Reference Project, provides for rehabilitation and regeneration of open space, including the Kedron Brook and Enoggera Creek corridors. Each worksite would be rehabilitated and landscaped to a high standard and would contribute to the urban amenity of each locality.

There is no requirement for additional open space arising from the Changed Project.

The proponent will continue to consult with BCC as requested in the submission regarding park and open space arrangements.

4.9.4 The Fire and Water Compound

Submissions

Appropriate mitigation measures should be implemented, through detailed community consultation, for local residents impacted by the new fire water compound and removal of proposed pocket park on land to north of Wongara Street.

Response

The design and siting of the emergency vehicle compound, while exempt from assessment under City Plan, would still need to be consistent with the City Plan codes. The scale of this facility is generally consistent with the existing residential development in Wongara Street.

4.9.5 Relocation of the tunnel control centre

Submissions

Some submissions objected to the relocated tunnel control centre. The submission suggests that the tunnel control centre is located in the wrong zoning and should be relocated to an MP2 MP3, MP4 or light industrial precinct. Residential properties fronting Brookfield Road should not have amenity destroyed by an office building and maintenance that operates '24/7'. The submission asserts that CNI does not have the right to disobey the town plan which exists to safeguard amenity of residential areas.

Location of the proposed entrance to Control Centre will require traffic coming from the CBD /Airport to use Brookfield Road to access the Centre. The submission suggests that this argument was previously used by BCC to refuse application for commercial building. Furthermore, vehicular entrance/exit is too close to the corner of Stafford Road to be safe. Traffic from Everton Park could bank back into Stafford Road, resulting in injuries and fatalities.

The submission suggests there is a probability of adjoining land being used as car parking for the Tunnel Control Centre, and is concerned about potential impacts on privacy, glare from lighting, noise and security.

The submission suggests there is a probability of a tunnel entry from Stafford Road located behind property with only protection of Tunnel Control Centre car park. The submitter states that they have not received any definitive answers regarding noise levels, screening/fencing and landscaping.

Response

The Tollroad Control Centre, referred to as the Airport Link Operations Centre (ALOC) is an integral part of the Airport Link project and is exempt from assessment under City Plan. The design and siting concepts

provided with the Request for Project Change for the ALOC indicates a range of treatments to mitigate the interface between this facility and adjoining residential premises to the north.

In its operational mode, the ALOC would need to comply with local and State regulations with regards environmental impacts. The Coordinator-General's Conditions (Schedule 3, Condition 17) require the development of an Operation EMP. The EMP should make provision for managing such interface issues as night lighting, car park noise and access arrangements, and landscaping and urban design.

The Coordinator-General's Conditions (Schedule 3 Condition 16) require the proponent to consult and engage with the community about the impacts of the project. It is recommended this consultation process extends to the design process for the ALOC.

The location of the Stafford Road portal is indicated in the concept designs notified with the Request for Project Change (refer to Figure 3-8B). In accordance with the Coordinator-General's Conditions (Schedule 3, Condition 20), the project including the Stafford Road portal must be designed to achieve the environmental objectives and goals for road traffic noise. Further mitigation would be provided by the screen fencing along the boundary with the ALOC.

4.9.6 Public Art opportunities of the ventilation outlets and urban design treatments

Submissions

Submissions request greater detail on the architectural treatments outlined in the Request for Project Change (p61) to mitigate the visual impact of the ventilation structure. The submission notes that all ventilation outlets present significant public art opportunities and that the design of urban design treatments for the Lutwyche Road corridor should respond to BCC's 'Lutwyche Road Corridor Public Art Masterplan'.

Response

The proponent may accept the opportunity to engage with the community to incorporate inputs to the detailed design treatments of the public buildings associated with the project (eg ventilation station and ventilation outlets). The concept designs provided with the Request for Project Change indicated a high-quality design response to the treatment of the ventilation outlets. The proposal to bury or partially bury the ventilation stations also demonstrates a commitment to a high-quality urban design response.

However, the treatment of the ventilation outlets is a matter for detailed design.

4.9.7 Urban design treatments under the elevated structures at Enoggera Creek and Kedron Brook

Submissions

There are a significant number of elevated structures at Enoggera Creek and Bowen Hills precinct and the Kedron Brook area. Particular attention should be paid to the urban design of the underside of these structures.

Response

Agreed. This should be addressed in detailed design.

4.9.8 Urban design of structures including noise walls

Submissions

Construction of a 12 m elevated structure on Gympie Road will negatively impact visually on the outlook of my home as well as generating increased noise and air pollution. This should include 3 m high perspex noise walls to minimise noise impacts.

Response

The Changed Project presents a reduced impact, in comparison with the Reference Project, arising from the elevated roadway on Gympie Road. Whereas the Reference Project proposed a combination of elevated structures and reinforced embankments for five (5) additional elevated traffic lanes over Kedron Brook linking with Gympie Road, the Changed project proposes an elevated structure for three (3) lanes over Kedron Brook, reducing to two lanes to Gympie Road beyond the bifurcation to Stafford Road.

The detailed design of these mitigations must ensure the environmental objectives with regards noise attenuation, urban design and visual impact. The Changed Project includes mitigation measures to reduce the visual impact of elevated structures on Gympie Road.

4.9.9 Urban design themes

Submissions

Submissions suggested that the urban design themes should be developed to provide a greater degree of design integration and consistency with the urban design treatments of NSBT to better mitigate the visual impacts of each project and integrate both project works into the dominant urban fabric. In order to achieve a level of structure design integration with the adjoining NSBT tunnels, some form of canopy element consistent with the NSBT approach would be a preferred outcome. Submissions suggest that these proposed elements should not be identical, but should achieve a degree of similarity, integration and design referencing.

Submissions have noted that the overall visual complexity of the Bowen Hills interchange is increased and suggest that urban design treatments and structural design should be investigated to 'lighten' structural depth and minimise negative visual impact.

Green acrylic noise panels shows limited relation to VSO design. Confirmation required that acrylic noise panels will be accepted by Main Roads. Acrylic panels do not conform with Main Roads noise wall requirements. Concerns over the durability and maintainability of such materials. Confirmation is needed that sufficient screen planting width is available to mitigate visual impacts of the noise wall.

Unclear how the 'green gateway' portal element would be achieved as a constructed element. Concerns that such treatment is not feasible in terms of design, maintenance and plant viability. Would appear costly lane closures would be necessary for maintenance. Issues such as water wise use and maintenance minimisation and access will need to be resolved in detailed design to demonstrate suitability of proposed treatment. Recommend other appropriate 'hardscape' treatments be developed.

Submissions suggest that the Changed Project does not depict the same level, extent and intensity of boulevard treatment north and south of Sandgate Road over East-West Arterial as the EIS, seemingly with major impacts to streetscape amenity between Grace Street and Noble Street. Median planting to the north

of the Sandgate Road/ East West Arterial intersection is lost in the Change Project. Median planting preferred from landscape amenity value perspective.

Submissions contend that the proposed 'land bridge' is unsightly because it looks unfinished and hangs mid-air, a magnet for youth to congregate, and a convenient place to throw rubbish into the park and tunnel.

The submission suggests that no provision has been made for an area which cannot be disturbed by humans and that the retention of the trees next to Sandgate Road would have made a statement to people arriving at the airport.

Response

The Changed Project advances a range of entry and portal treatments within an integrated landscape response. The separation of the Airport Link portals at Windsor from the NSBT portals at Bowen Hills is in the order of 750m. While the portal treatments for the Changed Project are different to those of the NSBT Project, it is a subjective assessment to suggest they are incompatible. BC consider the portal treatments to provide an attractive and effective form of 'way-finding' within the complexity of the Bowen Hills road infrastructure.

While additional road infrastructure would be added to the Windsor / Bowen Hills interchange, the footprint of the Changed Project is reduced from that proposed in the Reference Project.. In the context of the setting (ie Enoggera Creek, Mayne rail yards, ICB and NSBT), the impact of the Changed Project would be relatively insignificant. The Changed Project proposes to address the visual impact of its infrastructure through a combination of landscaping and urban design.

The proposed treatments of the noise barriers represent one way of mitigating the visual impact of these structures. Consideration of Main Roads' inputs can be given during detailed design. It should be noted that BC will be responsible for the longevity, durability and maintenance of the noise wall treatments for the duration for the franchise period of 45 years.

Similar to the design treatments of the noise walls, BC will be responsible for the maintenance of the 'living green wall' proposed at the Clayfield portal for the duration of the franchise period of 45 years.

The proposed land bridge at Clayfield presents an effective landscaped buffer over the main alignment and over the Sandgate Road on-ramp. This landscaped structure would sit above the buried ventilation station and is considered to provide a superior urban outcome to that proposed in the Reference Project. Similarly, the proposed land bridge over the portals at Windsor would provide an area of landscaped open space in lieu of road infrastructure and would provide an effective, landscaped connection between Mann Park, Windsor East and the interim busway station at Federation Street.

Airport Link is situated within a long-established urban environment which has been modified extensively over more than 100 years. Contrary to the inference in the submission, there is no place existing within the project corridor which has not been heavily modified. Both the Reference Project and the Changed Project incorporated proposals for the rehabilitation of parts of the urban environment, most importantly Kedron Brook between Gympie Road and Shaw Road and again between Diggers' Drive and Melton Road. The intention to reinstate a form of riparian ecology along these reaches of Kedron Brook will contribute significantly to the biological, landscape and recreational values of Kedron Brook. Supplementing this significant improvement in the urban environment, the landscaped treatments proposed for the Clayfield portals to the Changed Project will contribute to an enhanced 'early impression' for travellers entering the City.

4.9.10 Urban design and road safety

Submissions

Safety risk of high density urban forests - design offset from road and species selection need to be measured against risk to public road and pedestrian traffic safety. Tree planting may not be feasible and will have an impact upon change design. Lower planting may have to be substituted in lieu, having significant aesthetic impacts on change design.

Concern over the use of silver Alucabond panelling for the Windsor ventilation outlet as an alternative to the originally proposed mix of architectural materials. The high reflectivity of the panelling may create a glare hazard for motorists and negatively impact amenity. This should be investigated and resolved during design development.

Response

As with the proposed design treatments to the noise barriers, BC will be responsible for the safe operations of the Changed Project for the franchise period of 45 years.

BC also will be responsible for maintaining the carriageways free from vegetation and other potential obstacles. The proposal in the Changed Project to establish signature landscaping including large trees should be supported for the strong positive contribution to Brisbane's character and amenity. This is preferable to expanses of road infrastructure with little or ineffective landscaping.

The design treatment of the Windsor ventilation outlet as presented in the Changed Project is intended to minimise and mitigate the visual impact of the structure for nearby residential areas and also for the neighbourhood at large. Considering the location and orientation of the Windsor ventilation outlet, potential impacts of glare hazards for motorists seems unlikely. However, the position put in the submission is agreed and should be resolved during detailed design.

4.10 Hazard and Risk

4.10.1 Flood mitigation

Submissions

The Changed Project includes a number of structures built over and within current creeks and floodways. A number of these structures are in particularly sensitive areas and subject to existing flooding issues. The submission requires all works for the Project to ensure no net increase in afflux and that all impacts are appropriately mitigated.

NRW is satisfied that the flooding mitigation aspects of SPP 1/03 have been appropriately covered.

Response

Schedule 3, Condition 4(c) of the Coordinator-General's Conditions requires that the Construction EMP incorporate the performance criteria contained within the draft outline EMP (Construction) of Chapter 19 of the EIS. This in turn requires the project to be designed to avoid adverse impacts on flood levels on ARI 100 year storm event in Enoggera Creek and Kedron Brook upstream of the project works. The project works have been designed so that it does not adversely affect the hydraulic performance of any existing drainage infrastructure, including below ground and overland flow infrastructure.

4.10.2 Incident management

Submissions

A statement is required from the Coordinator-General about what will occur in relation to dangerous goods vehicles and if a terrorist event, serious accident or serious fire occurred within the tunnel.

Response

This issue does not arise from the Changed Project.

The Coordinator-General's Conditions (Schedule 3, Condition 22) require that the operation of the Airport Link Project be conducted in accordance with the Operation EMP and the Operation Incident Response (OIR) EMP Sub-Plan.

The OIR EMP Sub-Plan must include:

- simulation exercises prior to commencement of operation of the Project;
- provision for routine testing of emergency response systems;
- designation of responsibilities in the event of an incident.

Dangerous goods vehicles would be precluded by regulation from access to the tunnel. The safe and effective operation of the tunnel would be monitored and controlled from the Tunnel Control Centre.

In the event of accident, terrorist event or serious fire the incident management plans incorporated in the OIR EMP Sub-Plan would be implemented.

4.11 Urban Regeneration

4.11.1 Resumption of the current dog off-leash area for a cycle track

Submissions

The proposal to permanently close part of the dog off-leash area to build a duplicate cycle path on the northern bank of Kedron Brook will significantly reduce the size of the dog park, and is an unacceptable loss to the community. The dog park will be permanently reduced in size, with cycle paths on both sides of Kedron Brook. The submission seeks assurance that after construction is complete, the cycle path on the south side of the creek will be restored, and the duplicate cycle path constructed on the north side of the brook, built as only a temporary relocation to facilitate construction, will be removed and that the dog off-leash area will be returned to its previous configuration.

Submissions suggest that the change of bikeway route can be on the high side away from the creek so that dogs can be walked freely without interfering with the cyclists and pedestrians. A fence would need to divide the area for safety.

There is another area on both sides of the creek further north that are also suitable for off-leash dog areas to regain some of the space taken by the bikeway.

Users of this area have been encouraged to own dogs having this facility available. It is one of the best areas in a diminishing green space in Brisbane. These areas are very important to people of Brisbane, and are used by large numbers of people night and day.

No signs have been posted at the off-leash dog area to notify the users of planned changes. Not notifying users in reasonable time has taken away their democratic right to object. However, it has not taken away the right to do so at any other time.

Petition relating to the relocation of the bike path on Kedron Brook, transferring the path from the eastern side of the Brook will cut the dog off-leash area by about half.

Response

A suitable alternative off leash area will be provided in consultation with BCC.

4.11.2 Redevelopment opportunities

Submissions

Insufficient consideration has been placed upon the environment that will be left once construction of Airport Link and the Northern Busway have been completed and then how these areas can and will be redeveloped to maximise the return on investment for this infrastructure.

Response

This submission does not recognise the landscape rehabilitation measures proposed for the worksites and newly-created spaces in both the Reference Project and the Changed Project. Worksites and other areas suitable for redevelopment, must be used in accordance with Brisbane City Plan 2000.

4.12 Cumulative Impacts

4.12.1 Cumulative road network considerations

Submissions

The submission notes that there will be a cumulative effect of this project and a range of other key projects including the Gateway Upgrade Project, Airport Roundabout Upgrade and the NSBT. Collectively these projects could have a more significant impact from an environmental impact and traffic volume perspective. The submission asks whether consideration was given to the combined impact of heavy vehicle and equipment movement associated with the individual projects using the same key routes? Is there any need to synchronise related vehicle movements to limit the potential for congestion during peak periods in construction activity? Is there a broader regional congestion impact arising from heavy vehicles (other than with construction) seeking alternative points of access? Does the EIS comprehend the broader community impacts (dust, noise, congestion etc) that may accrue as a result of the number of projects underway (including perceptions of the extended period over which these impacts could apply)?

Cumulative affect of decisions made in respect of the Northern Busway and Airport Link have significant implications for the draft Lutwyche Road Corridor Neighbourhood Plan, particularly decision not to pursue ultimate busway solution before 2020 between Federation Street, Windsor and Stoneleigh Street, Lutwyche means redevelopment of Windsor East and Albion Road Precincts should be postponed. Decision to proceed with Kedron Park busway station on the western side of Lutwyche Road promotes pursuance of complementary land use intensification around this station.

Response

For the Reference Project, the Coordinator-General recommended, in his report of 23 May 2007⁴, that “... a coordinated approach should be taken to delivery of major transport projects in the inner northern suburbs of Brisbane, including the Airport Link, Northern Busway and NSBT projects.” The Coordinator-General went on to recommend that the proponent “... establish a Construction Liaison Committee comprising representatives from the Queensland Government (including Queensland Transport, Department of Main Roads, Office of Urban Management, Department of Emergency Services and Department of Infrastructure.”

A key aspect of a coordinated approach would include the development of construction traffic management plans, taking into account the staging and traffic implications of other major projects using the same haulage routes for spoil and materials. Specific environmental management measures (eg noise, dust) for each project would attend to construction environmental impacts. If management objectives are achieved, then the cumulative impacts would also be managed.

The Changed Project requires the same, coordinated approach to managing the cumulative impacts of the construction of these major infrastructure projects, including the Gateway Upgrade Project and the Airport Roundabout Upgrade Project.

Similarly, the Changed Project would not impact differently upon the delivery and implementation of a Lutwyche Road Corridor Neighbourhood Plan than would have the Reference Project.

The location of the busway station, while not a matter for this Request for Project Change, is substantially the same as presented in the Northern Busway Concept Design and Impact Management Plan, and represented in the EIS for the Reference Project.

4.13 Construction Methodology

4.13.1 Approvals

Submissions

DPI&F has issued approvals for marine plant disturbances at Enoggera Creek and for construction of a waterway barrier on a Kedron Brook tributary.

The proposed relocation of bridgeworks and other changes that alter the footprint dimensions or infrastructure location, including waterway barriers, should be discussed with DPI&F at the earliest opportunity as existing approvals have limited flexibility and new IPA applications may need to be submitted.

DNRW advises that the proposed redirection of Kedron Brook triggers 'riverine protection' provisions under the IPA. If, however, works are undertaken by an 'entity' or on behalf of an 'entity', the process does not require a Riverine Protection Permit but is subject to self-assessable conditions. A plan of activities is required to be submitted to NRW prior to commencement of construction.

If works are not conducted by an 'entity', approvals required by NRW include:

⁴ Coordinator-General's Report, 23 May 2007, section 6 Summary of Evaluation, recommendation 5

- Riverine protection permit or IPA permit;
- Placement and fill, excavation;
- Works within a watercourse;
- Diverting the course of flow.

The project area is not mapped with remnant vegetation. Aerial photographs have identified that the area may require clearing of native vegetation on State land. All native vegetation on State land, remnant or not remnant, may require a clearing permit unless the clearing is exempt pursuant to Schedule 8. BCC Planning Scheme should be consulted to ensure vegetation clearing does not contravene local tree clearing laws.

Response

Noted and agreed. These approvals will be obtained by BC.

4.13.2 Construction noise and vibration at sensitive places

Submissions

Submissions contend that predicted vibration and regenerated noise levels within some sensitive areas (i.e. hospital and residential areas) exceed the Coordinator General's conditions appreciably, particularly during night time tunnelling operations. Not clear how the mitigation measures included in the Noise and Vibration EMP will achieve noise reductions of up to 19 dB. The Request for Project Change Report does not discuss the incidence of isolated noisy events (i.e. engine brake noise) inside noise sensitive premises and how it is going to be managed with respect to impact of sleep disturbance on the community.

Concerned that the front steps of the church and the Lyche Gate and front wall are not underpinned and may be easily affected by tunnelling. Request that the steps are reconstructed with foundations and provide additional protection to the Gate and front wall to help them withstand the tunnelling vibrations.

Protection of income for the church from wedding and funeral services, particularly during construction. Request for air-conditioning to be fitted to the church to mitigate the downturn.

Concerned about impacts of dust and maintaining the church's external appearance. Request cleaning of the building to remove dust.

Response

As noted in the Request for Project Change, the changes to project delivery results in reduced impacts at St Andrew's Anglican Church compared to the Reference Project. As noted in the Request for Project Change, goals for noise and vibration to guide construction planning and management were established in the Coordinator-General's Conditions. The Coordinator-General's Conditions also provide that where the goals are predicted to be exceeded, the Proponent is required to implement mitigation measures and consultation to manage the impact on potentially-affected residents. These goals and triggers for additional mitigation measures and consultation remain relevant and necessary for the Changed Project.

Monitoring of noise and vibration is required under the Coordinator-General's Conditions Schedule 3 Condition 9. This includes predictive modelling for day time construction noise and vibration where goals established by the Coordinator-General's conditions are likely to be exceeded there must be consultation with occupants of potentially affected premises and mitigation and management.

Guidelines for vibration for minimal risk of damage at heritage listed places are established by Schedule 3 Condition 9(1) of the Coordinator-General's Conditions. This condition requires building condition surveys be undertaken in locations identified in the predictive modelling as potentially being affected with cosmetic damage by vibration from project construction and related activities. In addition, construction in the vicinity of the Lyche Gate and front wall at St Andrew's Anglican Church would be addressed through the detailed measures contained in the Construction EMP Noise and Vibration Sub Plan.

The Coordinator-General's Conditions Schedule 3, Condition 8 provide criteria for dustfall management. The condition also provides for monitoring of dust fall during construction to determine whether the requirements of the Construction EMP are being met. A monitoring station is required by the condition in or immediately adjacent to Woolloowin State School which would allow monitoring of compliance thus addressing the concerns of the Church. Monitoring results must be reported in a construction compliance report to be produced at least 6-monthly during construction. Exceedences of the goals require an interim report within 2 days and a full report within 14 days of the incident. The Draft Outline Construction EMP in Chapter 19 of the EIS provides for mitigation measures and corrective actions where construction impacts cannot meet the criteria.

4.13.3 Requirement for a water licence

Submissions

Submissions suggest that the EIS and Request for Project Change do not express that the owner of Airport Link land obtained a Water License in accordance with provisions of Water Act 2000.

Response

DNRW have advised that Kedron Brook is classified as a 'watercourse' under the Water Act 2000. The proposed temporary redirection of Kedron Brook does not constitute a diversion under the Water Act and therefore does not trigger the need for a development permit under the IPA.

DNRW have also advised that a creek/drainage line has been identified that crosses the project alignment at Toombul and is connected to Kedron Brook. DNRW recommends a request be lodged to determine the status of this water feature in terms of the Water Act.

All approvals required under the Water Act 2000 must be obtained by BC..

4.13.4 Risk to water quality and the maintenance of flows during construction of the Kedron Brook/Schulz Canal cut and cover

Submissions

Submissions suggest that the proposed cut and cover of the tunnel through Kedron Brook increases the risk to water quality during construction and would result in major works in the Brook, including diversion of flows. The EMP should be modified to take into account the changes in the crossing of Kedron Brook and additional area of disturbance on the southern side of the Brook and to protect water quality in Kedron Brook and Schulz Canal. Maintenance of flows and protection of water quality (particularly turbidity) are of primary importance.

Response

The Kedron Brook cut and cover works will be managed in accordance with the Design and Construction EMP and associated Sub-Plans to address in detail specific environmental impacts including the risk of

sediment runoff impacting on the water quality of Kedron Brook/Schulz Canal. The Construction Groundwater and Surface Water EMP Sub-Plan is specifically required to contain measures to avoid and manage impacts on surface water quality and also to avoid the contamination of surface waters (Schedule 3, Condition 4(c) of the Coordinator-General's Conditions).

Kedron Brook will be monitored daily for the presence of sediment or chemical plumes. Monitoring for water quality will also occur up stream and down stream of worksites on a fortnightly basis. Results will be recorded and made available to a relevant agency on request in accordance with the Coordinator-General's conditions.

4.13.5 Impact of construction on North Coast Rail Line and Airtrain

Submissions

Submissions contend that the Request for Project Change makes no significant mention of the impact upon rail infrastructure or services along the North Coast Line and the Airtrain for both passengers and freight. It is not possible to assess whether the Changed Project will have any permanent or construction period impacts upon rail infrastructure and services. QT is unable to be satisfied that impacts will be acceptable.

Response

As addressed in the Reference Project, the Airport Link infrastructure will cross railway lines at four points:

- In the southern connection area, the Campbell Street on and off ramps will cross over the Exhibition Line near Tufton Street;
- North of the southern connection area, the north-south tunnels will pass under the Ferny Grove Line near Somerset Street;
- In the north-eastern connection area, the east-west tunnels will pass under the North Coast Line near Jackson Street; and
- In the north-eastern connection area, the east-west tunnels will pass under the Airtrain near Elliot Street.

As with the Reference Project, the North Coast Line and Airport Line crossings of Airport Link will occur in the cut and cover tunnel sections of the north-eastern connection. To achieve this, limited closures of the rail lines may be required, in negotiation with Queensland Rail, during construction of the cut and cover sections.

The approval of Queensland Rail (QR) as the railway manager is required under the *Transport Infrastructure Act, 1994* where works are to be undertaken that will interfere with a railway. The preferred method of construction under the North-Coast railway line provided by BC is their pipe jacked type solution which would minimise disturbance to the railway during construction and would be subject to the approval of QR. The final decision on the detailed methodology will be undertaken in consultation with QR.

The Coordinator-General's Conditions Schedule 3, Condition 4(c) requires the Construction EMP to establish performance requirements to minimise as far as reasonably practicable, potential traffic disruptions to the operation of the public transport network (bus, rail) due to construction works. In this

regard the Changed Project has proposed a particular form of construction to establish the roof and supporting structure for the cut and cover under the North-Coast Railway line with the potential to minimise any disruptions to the operation of this railway line.

The State has entered into an agreement with QR whereby QR is prepared to allow the State permission to undertake the Project in the vicinity of the Rail Infrastructure Facilities on the terms and conditions provided in the Agreement between QR and the State of Queensland. This Agreement also includes a “Rail Interface Agreement” between QR and BC which when executed provides the conditions under which BC will have rights to commence construction of the Works within the QR leased or owned areas of the railway under its control and management.

4.13.6 Changes to alignment of mainline tunnels and the effects of underground ramps

Submissions

Tunnels described in the project should be constructed along the lines of Lutwyche Road and other existing roads and green areas that exist (i.e. Kalinga Park) to minimise future impact on residential properties.

There is no certainty that the Changed Project would result in a reduced impact on the urban amenity for all the residents of Lutwyche in relation to the ramps being constructed underground beneath Kedron Brook and Lutwyche in the vicinity of Woolloowin State School and St Andrews Anglican Church. The mainline tunnel will have increased depth through the area but the depth of the ramp tunnel will decrease as it comes to the surface.

Concern is expressed that the tunnel access the Gympie-Lutwyche Road that is to pass on the edge of the submitter’s property at Woolloowin, will have significant impact on the stability of the land between the tunnel and the units and also on the noise and vibration for the residents in the area when the tunnel comes into operation. Changes to the alignment of the mainline tunnels will also have significant impact on the noise and vibration experienced by residents above the tunnels when the tunnels come into operation.

Object to current tunnel route alignment as has had major impact on property value. Statement by reference project team during community consultation that the fixed Reference Project would not move more than a few metres from this fixed alignment was obviously false and misleading. All previous alignments did not directly impact on our property and it would make sense to relocate the alignment (to State owned properties) so that the impact on residential properties could be quarantined and at least five properties would not be affected. Properties that would be affected are tenant occupied properties.

The tunnel should be extended to go underneath Kalinga Park near Sandgate Road to avoid destroying mature trees and habitat. These trees are old and established and are needed to absorb tunnel and carbon emissions.

Response

The Changed Project will be designed and constructed to avoid, or to minimise and manage the risk of settlement due to construction, by roadheader, of the Kedron on-ramp. Construction by roadheader method is not expected to impact on residents through noise and vibration. The existing conditions (Schedule 3, condition 9) provide for consultation and mitigation measures where predictive modelling indicates the goals for noise and vibration might be exceeded.

As described in the Request for Project Change, and consistent with the Reference Project, no noise or vibration operational impacts are predicted for the tunnel sections of the Changed Project, and therefore the changes in alignment will have no changed noise and vibration effect for properties above the tunnel alignment.

4.13.7 Construction management

Submissions

Air and noise quality monitoring should be carried out during the construction period and if noise goals are exceeded between 6.30pm and 6.00am, construction should cease immediately. Local residents should be provided with ongoing reporting of this monitoring.

An offer to relocate residents' free-of-charge should be made, if at any stage noise or air quality goals have or are likely to be exceeded.

All contractors must be required to demonstrate compliance with noise and air quality goals and local residents should be kept informed about this.

Response

This issue does not arise as a consequence of the Changed Project

As with the Reference Project, the Changed Project would be governed by the Coordinator-General's Conditions requiring monitoring of ambient noise and air quality, and subsequent reporting, complaints, and corrective actions procedures to deal with exceedances of the goals. The existing conditions do not provide for work exceeding either the noise or air quality goals from progressing beyond the hours of 6.30am – 6.30pm Monday to Saturdays.

The Coordinator-General's Conditions require a Construction Noise and Vibration EMP Sub-Plan be prepared and implemented. That Sub-Plan must include measures for mitigation of predicted impacts on sensitive places, programming of activities, ongoing monitoring and consultative measures. The Coordinator-General's Conditions (Schedule 3, Condition 8) provide that, where predictive modelling indicates that the goals for construction noise and vibration might be exceeded during construction, then the proponent must implement a program of early and on-going consultation with potentially affected people, reasonable and practicable mitigation and management measures, and a monitoring program. A range of mitigation measures may prove effective and may be negotiated with residents and occupants of premises on a case-by-case basis.

In addition, the Coordinator-General's Conditions (Schedule 3, Condition 4) requires compliance reporting with conditions and EMP requirements. The Coordinator-General's Conditions set goals for both noise and air quality and require that if these goals are exceeded, additional mitigation measures are agreed through discussions with affected residents.

4.14 Spoil Handling, Haulage and Placement

4.14.1 Water Quality impacts on Kedron Brook/Schulz Canal

Submissions

The area of disturbance at Clayfield which drains to Kedron Brook/Schulz Canal will be increased. Risk of sediment from runoff or spillage from the proposed conveyor or truck loading will need to be managed.

Response

The Clayfield worksite will be managed in accordance with the Design and Construction EMP and associated Sub-Plans to address detail specific environmental impacts including the risk of sediment runoff impacting on the water quality of Kedron Brook/Schulz. The Construction Groundwater and Surface Water EMP Sub-Plan is specifically required to contain measures to avoid and manage impacts on groundwater and surface water quality including from the transport and placement of tunnel construction spoil and also to avoid the contamination of surface waters (Schedule 3, Condition 4(c) of the Coordinator-General's Conditions).

The conveyor route travels along the southern side Schulz Canal for a distance of approximately 1.7 km in the lower catchment of the Kedron Brook. Schulz Canal, where the conveyor will be located, is not developed for public access. Recreational activities, including a bike path, are present on the northern side of the watercourse. An access track along the Airtrain rail corridor exists and would be reused during construction of the conveyor.

The conveyor structure is proposed to be located approximately 10 m from the highly modified Schulz Canal. There are four small mangrove-lined drainage channels crossed by the route, as well as Battery Drain. All these watercourses have been heavily modified over time as a result of flood mitigation works, including significant bank earthworks to change flow paths into straight reaches for flood conveyance reasons and dredging of the bed to increase flow capacity.

Overall water quality in the Kedron Brook is fair to poor⁵. High levels of suspended solids, nutrients and bacteria have been recorded in the lower reaches of the catchment. Pollution in Kedron Brook is caused by urban activities rather than industrial point sources. Baseline monitoring, investigations and predictive modelling shall be undertaken to identify possible impacts from construction. All water protection controls will be implemented and approved as functional prior to the commencement of work adjacent to any watercourse.

During construction of the conveyor, potential risks to water quality include degradation of water quality from disturbance of acid sulphate soils or sediment runoff as a result of removal and disturbance of the existing vegetation and disturbance to or loss of marine plants. Erosion and sediment controls will be developed to ensure run-off from the conveyor route that have been disturbed and any stockpile materials do not contribute to elevated suspended solid concentrations in the watercourse. Site specific controls will be developed during detail design, and are likely to feature a range of measures including sediment fences, swales, and the use of mulch to protect exposed surfaces.

⁵ Airport Environment Strategy, Brisbane Airport Corporation 2004,

During operation of the external conveyor, the potential for runoff or spillage of spoil from the conveyor will be managed by controlling both the nature of the spoil material and the maintenance of the conveyor.

In relation to the nature of the spoil material, the proposed EPB tunnel boring machines can be operated in two different modes depending on the ground and water conditions encountered. In unstable ground, with higher water pressures and water inflow, the EPB TBMs will be driven in a closed mode. This is done by filling up the chamber with excavated material and setting up the soil conditioning system to create a paste for tunnelling. The consistency and water content of the conditioned spoil will be suitably managed and controlled such that active dewatering of the conditioned spoil will not be necessary. The conveyor will be enclosed where required to reduce noise, dust and risk of spillage.

Management measures to minimise and prevent the potential for spillage of spoil material from the conveyor and where necessary from truck haulage will be addressed through the Construction EMP and relevant Sub-Plans.

Typical management measures will include:

- induction and training for construction staff on procedures for recognizing, remediation and management of potential acid sulphate soils and contaminated land and spills and leaks of hazardous materials;
- daily inspections for and spillages with associated clean up procedures;

Kedron Brook Floodway and Battery Drain will also be monitored daily for the presence of sediment or chemical plumes – with monitoring locations to be agreed with BAC. Monitoring for water quality will also occur up stream and down stream of worksites on a fortnightly basis. Results will be recorded and made available to a relevant agency on request in accordance with the Coordinator-General's conditions.

4.14.2 The extraction of coal during tunnel construction

Submission

The EIS and the Request for Project Change fail to contemplate consequences arising from the presence of coal measures that lie in the path of the Airport Link tunnels. Environmental and safety construction methods must be adopted that prevent the incidence of coal measure “heating” and explosion during construction and operation of the tunnels.

The issue was also raised that the Commonwealth Minister for Environment and Heritage under the *Environment Protection and Biodiversity Conservation Act, 1999*, (EPBC Act) precluded consideration of the deposition of spoil containing coal waste on Federally controlled airport land. The Coordinator General is required to make EIS conditions that contemplate the extraction of coal during tunnel construction. A further Request for Project Change report and application accounting for the effects of coal extraction is required. A further public submission period is required prior to the project receiving approval.

The submission also raised questions regarding environmental health and safety rules and regulations applicable to the extraction of coal including

- the submission of the Airport Link design, construction and design life operation plans to the Queensland Department of Mines and energy for consideration by the Coal Mining Inspectorate;
- ensuring that the tunnels will not enter or be proximate to old coal mine workings in and about Clayfield;

- potential liability for construction and operations damages claims;
- the risk of the use of non-coal/non-intrinsically safe equipment to bore and convey coal on or about a built-up residential area and the need for full and formal disclosure of the methods of proposed boring/mining to all insurers, underwriters and financiers of Airport Link;
- the appropriate investigations are undertaken and reported on to ensure that acceptable levels of risk are achieved for the construction and operation of Airport Link;
- all geological drill cores and geological results be submitted to the Department of Mines and Energy for entry into the geological data base;
- the indemnification by BC of the Government in the event of closure of Brisbane Airport.

Response

The risk of intercepting coal seams during tunnel construction between Kedron and Toombul was identified in the Reference Project. The EIS reported that a small coalmine was established on the northern side of Kedron Brook in the very early 1900s outside but adjacent to the study corridor. It ceased production in 1909 due mainly to the difficulty of working the thin faulted seam. Geotechnical boreholes for the project intersected this coal in the north-eastern area just west of Sandgate Road. These coals could not be worked economically because of the thin faulted nature of the seam, the urban environment which developed above this area and the coal being of poor quality compared with other available deposits.

The EIS reported that it may be necessary to use the Swanbank Waste Management Facility near Ipswich if some of the construction spoil were to contain significant amounts of coal, even if of poor quality, that made it unsuitable for placement at identified spoil sites. This facility is proposed to be used by BC for the disposal of any contaminated spoil material, including any significant quantities of carbonaceous shales that may be taken by the external conveyor to the Brisbane Airport soil placement site for sorting.

BC has completed some preliminary analysis of the potential for encountering carbonaceous shales and also the risks of methane generation along the alignment of the Changed Project. The presence of coaly shale packages located in boreholes in the vicinity of Kalinga Park was noted, and the potential was recognised that these coaly shale packages were likely to contain gas of the type and quantity identified from the analytical work carried out on two adjacent boreholes in the Shaw Road-Bertha Street area where gas, predominantly methane, was identified between 0 and 1 m³/t. It was found that gas concentrations are very low, and appropriate ventilation (normal to tunnel boring) will likely be sufficient to deal with the risk of accumulation of dangerous quantities. BC have undertaken to incorporate in-situ gas monitoring into the ground investigations to be carried out in the detailed design phase of the project, which may need to consider the use of emissions modelling to define suitable ventilation flows within the tunnels.

Although there is no requirement for cores from the Airport Link project to be maintained by the Department of Mines and Energy the cores will be offered, at the end of construction, to the Department, where a decision on whether to accept them or not would be made. Discussions with the Department indicate that policy has been generally not to accept samples deriving from engineering projects in urban areas.

Where thin bands of carbonaceous material are anticipated to be encountered by the TBMs, the material will be effectively blended by the tunnelling process and would constitute a relatively small volume of material.

Physical separation of the spoil is not anticipated as part of the TBM tunnelling process. If spoil separation is required, including any carbonaceous shales, this will be done at the discharge point of the external surface conveyor.

As reported in the Request for Project Change, the placement of spoil at the Brisbane Airport will be assessed in accordance with the Airports Act, 1966 and referrals, if necessary, made under the EPBC Act for a determination as to whether it is a controlled action. This process will be undertaken by the Brisbane Airport Corporation Limited (BACL) on the basis of detailed information provided to BACL by BrisConnections regarding the nature of the material to be taken onto their land, including the potential for carbonaceous shale and coal waste, and also details regarding the establishment and management of the placement site(s). The presence of coal material in the spoil does not alter the risks to the Ramsar wetland. The proposed action was previously controlled on a precautionary basis due in part to the lack of information on the nature of the spoil material. The nature of the risk to the Ramsar wetland is yet to be determined by the Commonwealth on the basis of detailed information on the nature of the material and the proposed management of the placement site(s), including the management of unsuitable material.

Prior to moving material to the disposal site, appropriate verification of the spoil will be taken. Verification will be undertaken in accordance with the *Airport (Environment Protection) Regulations 1997*. The verifications process will ensure no unsuitable materials will be transferred to the site. Unsuitable materials will include but not be limited to the following:

- Contaminated Land
- Bituminous Asphalt from road milling & excavations
- Concrete and other construction debris
- Acid Sulphate Materials

The verification process ensures that the risk of these materials being transported to the spoil location is minimal. Should any of the above unsuitable material is inadvertently delivered to the site it will NOT be used as fill and it will be removed off the site immediately.

Prior to the spoil being loaded into trucks at its source point, the spoil will be classified as to material type. Once the material is in site, the delivery truck will be directed to specific spoil fill locations for the different classifications of spoil.

Spoil that is delivered to site via the overland conveyor will be discharged and stockpiled via a stacker conveyor. This material will be classified on site prior to loading and rehandling to a specific spoil disposal location such as the Swanbank Waste Management Facility.

4.14.3 Southern Spoil Haulage Route

Submissions

The submission is concerned about the proposed southern haulage route and possible impact on inner city residential area. Such impacts should be considered and mitigated in the development of the Spoil Haulage Management Plan.

Response

The Coordinator-General's Conditions (Schedule 3, Condition 5) require the preparation and implementation of a Construction Traffic EMP Sub-Plan and Construction Vehicle EMP Sub-Plan to manage both construction traffic and spoil haulage traffic. In addition, the Coordinator-General's Conditions provide for specific measures for the spoil haulage fleet and management of spoil haulage trucks. The Coordinator-General's Conditions also provide for construction air quality and noise goals, to be achieved through the implementation of the required Construction Air Quality EMP Sub-Plan and Construction Noise and Vibration EMP Sub-Plan. The spoil haulage impacts remain similar to the Reference Project as assessed in the Coordinator-General's Evaluation Report dated May 2007, with the Changed Project construction methodology providing for changed haul routes.

4.14.4 Northern Spoil Haulage Route

Submissions

Submissions contended that the Request for Project Change Report does not appear to provide information on impacts (i.e. air quality, noise, traffic) that the Northern Haul Route will have on residents and community in general if this is used during construction.

Response

An assessment has been undertaken of construction traffic use of the northern haul route, Gympie Road, Rode Road, Sandgate Road during both the AM and PM Peaks for 2010 during the worst case impact month. During this period 17 haul vehicles per hour per direction on the northern haul route north of the construction sites would be anticipated. Baseline traffic volumes in 2010 were calculated by interpolating between 2004 and 2012 modelled volumes on an approach basis at intersections along the route. The traffic increase due to use by haul vehicles at key intersections represent between 0.5% to 2% of total flow and would be expected to have a minor effect on safety issues.

The Coordinator-General's Conditions (Schedule 3, Condition 5) require the preparation and implementation of a Construction Traffic EMP Sub-Plan and Construction Vehicle EMP Sub-Plan to manage both construction traffic and spoil haulage traffic. In addition, the Coordinator-General's Conditions provide for specific measures for the spoil haulage fleet and management of spoil haulage trucks. The Coordinator-General's Conditions also provide for construction air quality and noise goals, to be achieved through the implementation of the required Construction Air Quality EMP Sub-Plan and Construction Noise and Vibration EMP Sub-Plan. The spoil haulage impacts remain similar to the Reference Project as assessed in the Coordinator-General's Evaluation Report dated May 2007, with the Changed Project construction methodology providing for changed haul routes.

4.14.5 Spoil Haulage through the Airport Roundabout

Submission

Submissions note that the route through the Airport Roundabout will (as noted in the Request for Project Change) be subject to further CTMP analysis and Main Roads approval. Until the Airport Northern Access Road Project is complete (mid 2009) restrictions from 5am to 8pm Monday to Friday, 5am to 4pm Saturday and 11am to 4pm Sunday is requested by Main Roads. The only exception as noted in the report

is the left turn movement into Airport Drive from the Gateway north approach where there is some capacity during peak periods. Main Roads notes the alternative extension to the southern spoil haulage route via Sugarmill Road and Lomandra Drive to bypass the airport roundabout at peak times.

Response

As reported in the Request for Project Change, the southern access route to the proposed Brisbane Airport placement site would be via Kingsford Smith Drive and would include the Gateway Motorway and Airport Drive, with an alternative route via Sugarmill Road and Lomandra Drive to bypass the Airport Roundabout at peak times. A northern haul route is also proposed using Lutwyche Road, Gympie Road, Rode Road, Sandgate Road, East West Arterial and Airport Drive. To bypass the Airport Roundabout at peak times, the Changed Project has also identified an alternative route along Sandgate Road north of its intersection with Rode Road to Toombul Road, the Gateway Motorway and Airport Drive via the slip lane.

The estimated volume of spoil required to be hauled to the placement sites is approximately 2.47 Million bank cubic metres (bcm). If the conveyor were to be used from the Clayfield site, the spoil to be removed by truck would be approximately 1.96 M bcm, creating just over 300,000 truck movements (i.e. full trucks to placement sites and empty trucks returning) over a 29 month period from December 2008 to April 2011.

It is estimated that an average of 10 truck movements per hour would pass through the East West Arterial/Gateway Motorway/Airport Drive interchange in each direction, rising to 15 per hour in periods of peak work activity. This represents well under 0.5% of background peak hour flow through this intersection.

The Northern Access Road to the Airport, with connection to the new Gateway Upgrade Project between the existing Gateway bridge and the Gateway Motorway at Northgate is planned to open in mid-2009. This is anticipated to relieve the current congestion at the Airport Roundabout. Until this is operational however it is anticipated that haulage from the Changed Project will use alternative routes, such as via Sugarmill Road and Lomandra Drive, from the south and Toombul Road and the Gateway Motorway slip lane from the north to avoid this intersection during peak periods. In this regard it is suggested that no condition is imposed on the Changed Project to restrict haulage through the Airport Roundabout, and any such condition would be ineffective to ease peak hour congestion unless such a restriction is applied to all heavy traffic using the Airport Roundabout.

Even if trucks were used instead of the conveyor to haul spoil from the TBMs, this would not occur until mid 2010, after the opening of the Northern Access Road, and would result in approximately 32 truck movements per hour over a proposed 18hr haulage time, avoiding peak hour movements through the airport roundabout. The increased truck movements on the East West Arterial would represent less than 0.5% increase on all vehicle trips.

As identified in the Request For Project Change Figure 4-4, spoil haulage may commence in December 2008 and therefore the potential for overlap exists between December 2008 to mid 2009. There are no restrictions on use of the road infrastructure in Brisbane placed on other major projects. There is likely to be a three month ramp up period in early 2008, followed by a likely three month period of spoil haulage through the roundabout prior to traffic congestion relief being provided by the new Gateway Upgrade Project connection to the airport.

A construction traffic and a construction vehicle EMP Sub-Plan would each be prepared in accordance with the existing Coordinator-General's Conditions to manage peak traffic period impacts including identifying the following measures within the required EMP Sub-Plans:

- 5(c) (iv) measures for avoiding disruption of scheduled major events and to coordinate with scheduled major construction works on other major projects;
- 5 (d) (i) haulage fleet management to (A) avoid, or minimise and mitigate, disruption to local traffic movements generally and particularly during peak traffic periods including school drop-off and pick-up times;
- 5 (d) (ii) specific measures for the haulage fleet to (C) avoid haulage during peak traffic periods where reasonable and practicable, including in peak traffic periods associated with major events at the RNA Showgrounds, Bowen Hills;
- 5 (d) (iii) Spoil haulage trucks to be fitted with measures to facilitate (A) real time management of trucks and traffic conditions to avoid traffic congestion, particularly in peak times, and real time scheduling to avoid queuing and the use of local roads.

The Construction Traffic EMP Sub-Plan must also be provided to Queensland Transport, Department of Main Roads and BCC prior to its implementation.

It is not usual practice to impose project-specific restrictions on use of the road network, rather than to manage the efficient operation of the network.

4.14.6 Construction and operation of the spoil conveyor

Submissions

Submissions have expressed support for the proposed spoil conveyor to reduce the impact of spoil haulage.

There is no mention of how this may be constructed, managed, or what lease arrangements along/through the Airtrain might be required for the proposed spoil conveyor. The submission has concerns about potential impacts on Airtrain's rail services both during construction and post completion. There is also the question of impacts on Airtrain's land and proposed compensation for land and patronage impacts. The submission would like to see mitigation strategies for impacts on Airtrain's rail services.

Issues related to the EPBC Act should be referred to in regard to the conveyor sections of the [Request for Project Change Report.

Submissions suggest that the Request for Project Change Report does not provide information on the hours of operation of the conveyor system and what magnitude and nature of the noise will be nor what kind of noise modelling was used to assess the conveyor system.

Submissions have been made seeking information as to what the impacts of the shortened conveyor options will be for access via the East-West Arterial.

This may result in ambient noise levels along the conveyor path increasing unless noise emissions are minimised through the implementation of appropriate operational and maintenance procedures.

Public safety will need to be considered in the design and operation of the conveyor to prevent public access, and people, particularly children.

Conveyor increases the risk of spoil being spilt during operational upsets which could end up in the Brook/Schulz Canal. Recommend operational plans for the conveyor system include contingency for spillages and emergency stockpiling during upset conditions.

Note that noise impacts from the conveyor are deemed "unlikely", although this is in relation to human and not animal perceptions, so support and further encourage mitigation measures in relation to noise impacts from the conveyor.

Response

The existing Coordinator-General's Conditions (in particular Schedule 3, Condition 9) are appropriate to apply to the conveyor infrastructure, including the preparation of a Noise and Vibration EMP Sub-Plan that meets the construction noise goals, and includes appropriate monitoring requirements. While final detailed design will be undertaken to ensure compliance with the Coordinator-General's Conditions, preliminary noise modelling was undertaken to predict whether compliance with the appropriate (internal) noise goals could be achieved at night given that this is the most sensitive time period and that the conveyor can operate 24 hours per day.

This modelling showed noise mitigation would likely be required (predicted external levels were up to around 55 dBA at the closest homes with standard idlers) but that the use of either low noise type idlers and/or enclosure of the conveyor (partial or full – subject to detailed design) would be adequate to achieve the required noise goals.

As with all conveyors, the noise is of a quasi steady-state nature, broadband and free from any tonal or impulsive characteristics when maintained appropriately.

Should a shortened route for the conveyor be adopted, the spoil handling facilities would be situated on land in the Hendra industrial estate to the south of the Airtrain alignment and west of Nudgee Road, as described in the Request for Project Change. The shortened conveyor proposal allows for the containment of potential environmental effects within a spoil handling enclosure or shed. The spoil handling facilities would be consistent in their character and scale of operation with other industrial activities in the vicinity.

The preferred haul route from this facility would be north-bound along Nudgee Road, to avoid the potential for haul vehicles to be delayed in congested traffic on and around the airport roundabout.

During detailed design for the installation of the conveyor system, a range of issues need to be addressed, including:

- safety for both operators and the community;
- environmental management (ie risk of spills, noise, night lighting), leading to a request for additional conditions to be considered by the Coordinator-General.

4.14.7 Use of Rode Road as a northern haul route

Submissions

Submissions suggests that based on BCC records, Rode Road was resurfaced between 1986 and 2000 to a 20 year design life of 7.5×10^5 ESA. The loading of 6.3×10^5 ESA over 26 months of spoil cartage represents 83% of the total design loading for these pavements. Rode Road is unlikely to withstand the loads imposed by the proposed spoil cartage operation and the northern haul route should not be adopted unless strengthening of this pavement is undertaken before spoil haulage operations commence.

Mitigation measures should consider limiting daily haulage vehicle trip numbers to protect the amenity of properties on and near the northern haulage route, in particular Rode Road. In addition, residents living along or in proximity of this route should be advised of this proposal by the proponent.

Use of Rode Road as a spoil haul route is likely to pose potential safety risks, given the projected increase in heavy vehicle movement through a predominantly residential area, particularly safety implications for:

- Wavell Heights Family Day Care at Rode Road;
- roundabout of Rode/Bilsen/Edinburgh Castle Roads (i.e. current size and design may be inappropriate to cope with projected traffic increase);
- cyclists and pedestrians.

Response

The use of Rode Road for spoil haulage is a change from the construction methodology.

An assessment has been undertaken of construction traffic use of the northern haul route, Gympie Road, Rode Road, Sandgate Road during both the AM and PM Peaks for 2010 during the worst case impact month. During this period 17 haul vehicles per hour per direction on the northern haul route north of the construction sites would be anticipated. Baseline traffic volumes in 2010 were calculated by interpolating between 2004 and 2012 modelled volumes on an approach basis at intersections along the route. The traffic increase due to use by haul vehicles at key intersections represent between 0.5% to 2% of total flow and would be expected to have a minor effect on safety issues.

Rode Road is designated by BCC as an arterial road under City Plan. The use of Rode Road as an arterial road, including for the haulage of spoil, is within its intended function. The impact upon the Rode Road pavement due to the additional heavy vehicle traffic along Rode Road will be offset by a reduction in traffic along other BCC-controlled roads. Resources currently allocated under BCC's road maintenance program can be directed away from those roads which experience a reduction in traffic because of the Airport Link Project to strengthen the Rode Rd pavement.

Compliance with the Coordinator Generals Conditions (Schedule 3, Condition 5) will afford BCC the opportunity to review the effect upon the Rode Rd pavement and provide Government with the opportunity to implement appropriate mitigation measures if required. Further, the Project Deed requires BC to undertake condition surveys by independent and appropriately qualified assessors, to establish the condition of the infrastructure, such as roads, that could be affected by the Project Activities.

An assessment of the performance of the roundabout of Rode/Bilsen/Edinburgh Castle Roads has shown that construction traffic has a minimal effect on the overall operation of the roundabout. The approaches on Rode Road would operate well within capacity, with negligible change in average delay and minor change in forecast maximum queue lengths.

The Coordinator-General's Conditions (Schedule 3, Condition 5(c)(iii)) require that the Construction Traffic EMP Sub-Plan address measures to maintain safe and functional access to ensure pedestrian and cyclist safety and movements.

Community consultation for spoil haulage routes will be managed through the community engagement process which is set out in the existing Coordinator-General's Condition (Schedule 3, Condition 1). That community engagement process includes not only the provision of information through the Project website and early and on-going engagement with owners and occupants of premises adjacent to the proposed works, but also establishes a responsive complaints process.

4.14.8 Impact of spoil haulage on road pavements for State controlled roads

Submissions

Submissions contend that the report contains insufficient detail about potential impacts from spoil haulage on intersections and pavements on the State Controlled Road network including Gympie/ Rode Roads, Sandgate/ Rode Roads, Sandgate/ East West Arterial Roads and Sandgate/ Toombul Roads.

Response

There is less than 0.5% expected increase in daily and peak hour traffic along the spoil haulage routes on State controlled roads and the use of these roads for heavy vehicle spoil haulage is consistent with their designation and intended function and any impact on the pavement will be managed by the State as part of their normal maintenance arrangements.

4.14.9 Impact of spoil haulage on network performance

Submissions

Submissions contend that it is unclear what the temporary tidal flow impacts during construction along Gympie Road and the increase in heavy vehicle movements will have on network performance.

Response

The Department of Main Roads and BCC, as the relevant road authorities, will assess and manage all temporary and permanent traffic changes on their respective roads. Under the existing Coordinator-General's Conditions, both the Department of Main Roads and BCC are entities with jurisdiction for the Construction Traffic EMP Sub-Plan required by Schedule 3, Condition 5 of the Coordinator-General's conditions. There is less than 0.5% expected increase in daily and peak hour traffic along the spoil haulage routes on State controlled roads and the use of these roads for heavy vehicle spoil haulage is consistent with their designation and intended function.

Additional information regarding the temporary tidal flow will be provided to BCC and DMR as the Traffic EMP Sub-Plan is developed.

4.14.10 Amenity impacts of spoil haulage

Submissions

Submissions have suggested that it is important to consider the one off events at night (i.e. one truck every 15 minutes) and the potential for truck haulage construction noise to have a significant impact at night. Care should be taken when using terms such as "undetectable" and "insignificant".

Submissions note that it is important to consider the noise impacts of trucks hauling spoil as opposed to general vehicles. Submissions question whether the road traffic noise from an increase in spoil truck trips at night on the East West Arterial would be minimal and still unlikely to be detectable has been confirmed by noise modelling or an assessment based on previous noise modelling for the Reference Project. The Request for Project Change does not consider road gradients along the haul routes with particular consideration given to sensitive areas (i.e. schools, parks, health facilities, nursing homes, etc).

Submissions suggest that spoil removal impacts for NSBT have been addressed through contractors being required to use covered trucks, new and well-maintained vehicles, GPS tracking to monitor vehicle movements and times, as well as education about driver behaviour. Submissions seek assurance that all

trucks will cover their loads and that noise, dust and any structural movement would be within acceptable levels.

Submissions provide that the Request for Project Change Report does not appear to provide information on impacts on air quality during construction from projected increase in heavy vehicle movements.

Response

As with the Reference Project, the Changed Project proposes the use of the arterial road network for spoil haulage. Generally, arterial roads are available for use by heavy vehicles at any time without the requirement for controls to manage and maintain amenity. Furthermore, the amenity of arterial roads is different to the amenity for lower-capacity local roads and is more likely to be subjected to the movement of heavy vehicles. In this context, the use of arterial roads for spoil haulage is appropriate.

Irrespective of whether an arterial road is used for spoil haulage for Airport Link, the amenity will be impacted by the movement of heavy vehicles.

Implementation of the Coordinator-General's conditions (refer to Schedule 3, condition 5) relating to spoil haulage management and construction vehicle management will assist in maintaining amenity along the arterial roads to a level commensurate with their function in the network. These conditions are the same as those imposed on the NSBT Project and which are noted as proving successful in minimising and mitigating the environmental effects of construction vehicles.

The changes in heavy vehicle trips for spoil haulage on arterial roads are minor relative to daily traffic flows and consequently are insignificant in terms of potential changes to ambient air quality.

4.14.11 Acid Sulphate Soils (ASS) Management

Submissions

All proposed spoil excavation, including the additional amount identified within the Changed Project, that meets the triggers under State Planning Policy 2/02 must be investigated in accordance with SPP2/02 and its associated documents. The EMP sub-plan should detail the ASS or potential ASS risk level and management solutions for all relevant spoil associated with the Project.

Response

The Coordinator-General's Conditions (Schedule 3, Condition 11) requires that prior to the commencement of works in the vicinity of Enoggera Creek, Kedron Brook and Schulz Canal, detailed investigations to identify the risk of intercepting ASS or potential ASS must be undertaken. Where those investigations identify a potential risk, an ASS EMP Sub-Plan must be prepared, including in accordance with SPP2/02 as recommended in the submission.

4.15 Construction Worksites

4.15.1 General amenity issues from proposed worksites

Submissions

Submissions suggest that the cumulative impacts of the proposed changes will have an adverse affect in some areas, particularly in areas that incorporate worksite changes (i.e. Chalk Street, Truro Street and

Kalinga Park). It is suggested that the Proponent should mitigate and manage potential adverse impacts caused by proposed worksite changes to minimise diminished amenity of local residents.

It is unclear what actions will be taken to protect residents from undue noise during night works and construction over extended periods, so that they can sleep properly.

Response

Actions necessary to protect residents during night works or extended construction periods will vary, depending upon construction methods and predicted impacts. The measures will be designed to achieve emission goals which have been set by the Coordinator-General to protect residential amenity and avoid sleep disturbance.

The Coordinator-General's Conditions, Schedule 3, Condition 9 provides that prior to the commencement of construction works, a Construction Noise and Vibration EMP Sub Plan must be prepared and implemented, addressing environmental objectives and performance criteria for noise and vibration, measures to mitigate and manage adverse environmental impacts from noise and vibration and to establish early consultation with the owners and occupants of potentially affected sensitive places. Such sub-plan is required to be based on predictive modelling of the potential noise and vibration impacts having regard to the proposed construction methods, the proximity of sensitive places and where the duration of construction exceeds 2 weeks in a particular locality. Where the predictive modelling predicts that the noise goals for sleep disturbance are likely to be exceeded by construction works, then consultation, reasonable and practicable mitigation and management measures and a monitoring program must be adopted. These measures must be developed in consultation with owners and occupants of potentially affected premises.

4.15.2 Impacts of the Windsor Worksite

Submissions

Submissions have expressed concern about the impact on residents from the Windsor worksite including:

- no acoustic shed is being built to mitigate construction noise from the Windsor worksite;
- noise and constant disruption due to the proximity of construction and vehicle movement is of great concern and is not able to be quantified. Mitigation of noise impacts should include a soundproof tunnel for trucks to pass through;
- traffic issues, in that closing Federation Street will cause slowing of traffic out of the street in peak hours, and it is likely that traffic will bank up at Cartwright Street waiting to do u-turns, causing congestion to other road users;
- no consideration is given to future development in this pocket. The removal of traffic lights on Lutwyche Road is not logical with future population increase and increase in bicycle traffic;
- proximity to blasting and potential impact on the submitter's brick home and potential for damage from debris from blast sites, despite the use of blast mats;
- safety and health concerns for the elderly and children around the construction worksites.

Submissions have suggested that submitters are not satisfied that a thorough investigation into alternate truck routes for spoil removal from the Windsor worksite has been conducted. Submissions suggest that similar spoil removal methods to NSBT are implemented (i.e. exiting the site directly onto Lutwyche Road, at or near the intended Lutwyche Road entrance point). The current proposal (i.e. making Morris Street one

way, removing on-street parking and erecting a noise fence in the middle of the road) is not a liveable option.

Suggested mitigations:

- require home to have fully ducted air-conditioning in every room and compensated for any extra electricity used, however not convinced that living in air-condition environment 24 hours a day is good for health. Normal air-conditioning treatments are not designed to filter such high levels of pollution.
- Would need water tank or special dispensation to use town water to wash down vehicles, and/or house due to dust. Compensation should also be paid for use of professional house-cleaners.
- Residents should be allowed special watering times (i.e. at least one hour twice a week) as dust will kill lawn and plants during construction.
- Request air tester and sound monitor to be placed within the vicinity of house with weekly reports on dust and noise levels.
- Request building inspection with photographic detail to document any future damage to property from the heavy machinery and blasting and an independent study on the possible effects to a brick home of the blasting. If there is a possibility that structural damage could occur, this will compromise our ability to provide a safe home environment for our children and will not be tolerated.
- Require the construction of a new higher fence as an additional sound barrier. A sound barrier must be placed along the entire length of the footpath on the western side of Morris Street. This should be visually pleasing, similar to the high fence erected between McDonalds and Newmarket road on Lutwyche Road. Double-glazing would be ineffective on house. Extra sound barriers may need to be installed.
- A line of fast growing lilly-pillies or a similar fast growing high hedge must be planted and maintained on the footpath outside our home to provide a natural pollution screen for our home.
- All construction lights must be shielded so that no on-site lights are shining on to Morris Street.
- Lists to be provided to residents of any possible hazardous materials that will be stored, used or moved through the worksite and detailed explanation of types of explosives being used and the necessary exclusion zone.
- Require list of all houses with asbestos through them, which require hazardous waste material removal and want to be notified in advance when those buildings are being removed.
- Request the small deck of our flat be completely enclosed with blinds to prevent dust settling, two small windows be double glazed and air-conditioning installed in the flat.
- Require temporary relocation at any stage throughout construction and rent and all costs relating to relocation compensated.
- Home should be washed every two months to remove dust and grime and to protect recent paintwork.
- Will seek compensation to any damage to property.

- Seek compensation for washing cars monthly.
- Must be compensated for the loss of public parkland for the duration of the project, considering that we are frequent users of Mann Park.
- A traffic light system must be in place for us to exit and enter our area at all times during construction. At no time must Bryden Street be our only way of exiting the neighbourhood because it is too dangerous to turn right onto Lutwyche Road from Bryden Street.
- Insist that the new Gallway Street be finished as a priority before Federation Street is closed to traffic and that traffic lights be installed on Gallway Street that support a designated right turning lane into Gallway Street and left and right turns out of Gallway Street.
- Parking in front of houses is required to be restricted to residents and resident's visitors only at all times. A two-hour parking limit should be enforced in the area, with permit parking only to ensure construction workers and other residual long term car-parkers do not abuse our local streets.
- Pest control should be conducted in surrounding residences when houses are removed as vermin are likely to be disturbed by activities. Seek compensation as feel property will be unrentable.
- Traffic lights should be placed at Gallway Street and Lutwyche Road to ensure that motorists and can enter and exit safely, including left and right exit, and right turn light from Lutwyche Road. Change to streets will affect Morris Street, Federation Street and Gallway Street.

Response

Residents in Gallway Street, Federation Street and Morris Street would be subject to amenity impacts as a consequence of the establishment and operations of the Windsor worksite during construction.

The Coordinator-General's conditions remain appropriate and relevant, and provide for community engagement during construction, including early and ongoing engagement with owners and occupants of premises adjacent to the proposed works. The mitigation measures suggested, and the concerns of the individual residents will be addressed through the existing conditions set by the Coordinator-General.

BC intends to directly consult with these residents to understand their individual circumstances (eg at home or at work during the day). A range of options is available to minimise impacts, including noise monitoring, architectural treatment to manage noise (such as upgrading acoustic seals or double glazing), periodic respites or in extreme cases, consideration of relocation. BC has advised that they wish to achieve satisfactory agreed outcomes for those affected residents. Many of the suggestions in the submissions will form an initial starting point for discussions.

In addition, the Coordinator-General's Conditions also provide for special procedures to respond to complaints, issues or incidents, such as face to face meetings and ongoing communications with affected parties and a documented process for issues resolution. This process must be established before the start of construction works.

Construction impacts within this area in many cases may not be readily mitigated through the use of conventional noise barriers as this would impede access to residential properties. Alternative mitigation measures will need to be agreed with affected property owners and occupiers.

4.15.3 Impacts of the Kedron Worksite

Submissions

Submissions have expressed concern about the impact of noise, lights, dust, pollution and privacy with demolition of adjoining properties on Stafford Road. The submission sought information as to the exact type and height of screening/fencing that will be erected during construction work and function during operation.

Questions have been raised about the construction program, security measures to be implemented during demolition of adjoining properties, hours of operation, the location of construction compounds and construction traffic arrangements.

Submissions are concerned about potential decrease in property value due to proximity of construction works and entitlement to compensation and the need for a dilapidation survey prior to works commencing.

Response

Whilst the impacts have moved as a result of a change in location of the worksite, the Coordinator-General's conditions remain appropriate and relevant, and provide for community engagement during construction, including early and ongoing engagement with owners and occupants of premises adjacent to the proposed works. The mitigation measures suggested, and the concerns of the individual residents will be addressed through the existing conditions set by the Coordinator-General.

BC intends to directly consult with residents to understand their individual circumstances (eg at home or at work during the day). A range of options is available to minimise impacts. BC has advised that they wish to achieve satisfactory agreed outcomes for those affected residents. Many of the suggestions and concerns raised in the submissions will form an initial starting point for discussions.

There is no warrant for claims for compensation for adjacent properties arising from the Changed Project.

4.15.4 Impact of the Clayfield Worksite

Submission

Submissions express concerns with work carried out on the exit/entrance of Airport Link Project at Toombul, including with respect to:

- restrictions on park usage for Kalinga Park;
- changes in amenity due to TBM activities;
- dust particles generated while the spoil is taken excavation area and when earth embankment being filled in the Toombul Shopping Centre car park; and
- construction noise;
- increase in traffic passing house, and impact on quality of life;
- fallout of exhaust particulars;
- devaluation of land value due to proximity to ventilation stack;
- vibration of ground due to earthworks or excavation shifts house off its stumps or damages house stumps.

Suggest the following remedies to mitigate impacts:

- double glazed windows to alleviate noise during construction phase and operation;
- clear, see through sound barriers along southern side of East West Arterial to replace current ineffective wooden sound barriers. This would allow sunlight into backyard;
- house washed monthly during construction to remove dust and roof cleaned at end of construction phase;
- filtration system installed on ventilation stack minimise impact of exhaust particles on surrounding residential area and environment;
- financial compensation for devaluation of land by having ventilation stack within 300m;
- restumping of house if vibrations from earthworks or excavation works during construction shifts house off its stumps or damages house stumps.

Submissions are concerned that the proposed Clayfield worksite will block existing access from the southern side of Schulz Canal/Kedron Brook to Kalinga Park pathways, recreations areas, Centro Toombul and Toombul railway and bus stations, which is currently provided from Stuckey Road. The submission recommends that access to the relocated footpath will need to be maintained to replace current Stuckey Road entry point. The submission suggests that access be maintained into Kalinga Park through temporary or permanent footbridge installed adjacent to Parkland Street to provide access to relocated northern pathway in order to maintain resident's accessibility to community and transport facilities.

Response

The Changed Project proposes to launch two TBMs from an enlarged worksite to be established in Kalinga Park. It is noted that with the changed construction method, Kalinga Park mostly would be returned to community use much sooner than was anticipated for the Reference Project, with rehabilitation commencing 2 years earlier than planned for the Reference Project.

The submission raises a number of important issues which need to be addressed through the Construction EMP. BC propose to develop area-based EMPs to ensure local concerns about construction and the effects of worksites are addressed effectively. The area-based Construction EMPs would still address the core concerns about air quality especially dust, noise and vibration, night lighting, traffic management, spoil handling and management, site management and the like.

This approach allows for an area- specific range of management and mitigation measures to address local concerns. Maintenance of key pedestrian and cycle connections through and beyond Kalinga Park would be addressed in the development of the Construction EMP. The Changed Project provides for a comprehensive network of pedestrian and cycle paths through and beyond Kalinga Park and Schulz Canal.

4.15.5 Impacts of the Chalk Street and Truro Street Worksites

Submissions

The submission suggests that Chalk Street residents will be affected by drilling and blasting during construction and will suffer diminished amenity due to noise, dust and intrusive night lighting during night-time operations. Concerned about the disruption and impact of vibration and noise during the construction phase, particularly the construction site at Chalk Street. Pedestrian access could be restricted.

Traffic in Truro Street will increase due to removal of spoil. Truro Street will be further affected by noise, dust and intrusive night lighting during night-time operations. Worksite will have potential to change pedestrian access.

Response

The Coordinator-General's conditions (refer to Schedule 3, condition 1, conditions 4 and 5, conditions 7 and 8, and condition 9) provide for the careful and effective management of the worksites with the intention of minimising and mitigating the impacts of construction on adjacent properties, so that people can maintain a reasonable level of amenity within the context of the pre-existing setting. The area-based Construction EMPs should be address of the residential-worksite interface to address the potential for light-spill and other impacts arising from the dis-assembly of the TBMs at Chalk Street.

4.15.6 Construction Traffic Management

Submissions

The submission is concerned that maintaining existing traffic capacity during construction, particularly around Gympie Road with a tidal flow arrangement has not been demonstrated. The submission is concerned that operational characteristics (safety and capacity) during construction may not be achievable within the existing constrained corridor.

Submitters have also expressed concern that proposed staging of works may have significant impact on the Lutwyche Road corridor. BCC will have a role to approve Construction Traffic Management Plans that impact BCC Roads for the Project. Appropriate capacity should be maintained for all major roads including Lutwyche Road, Bowen Bridge Road, and connections to the ICB and Clem Jones Tunnel.

Response

As with the Reference Project, the Changed Project would be delivered in accordance with the Coordinator-General's conditions (refer to Schedule 3, condition 5) requiring a Construction EMP including a construction traffic EMP sub-plan and a construction vehicle EMP sub-plan which will be submitted to relevant authorities, including DMR and BCC.

4.15.7 Construction site access

Submissions

The Request for Project Change suggests that a number of work sites will be accessed through local streets. This includes the delivery of large plant. An Application for Travel of an Excess Mass and Dimension, Special Purpose Vehicle on BCC Roads would need to be lodged prior to use of these roads by such vehicles so that the impact of the loads could be assessed.

Access plan should be provided so that workers who have no requirement to transport special equipment by private vehicles will access the site by public transport. Supplementary services may be required to connect to the existing public transport network.

Response

As with the Reference Project, construction site access for the Changed Project would be managed through the development and implementation of a construction traffic EMP sub-plan and a construction vehicle EMP sub-plan.

4.16 Impacts on Schools

4.16.1 Construction impacts on Kedron State High School and Woolloowin State School

Submissions

Submissions are concerned about construction impacts near schools, in particular:

- possible heightened noise and vibration levels from tunnels beneath the Kedron State High School (KSHS) and Woolloowin State School particularly at the entrance portal near school buildings;
- acceptability of noise and vibration levels and continuity of the learning environment, with no disruptions during exam periods;
- the impact on school activities of idling vehicles in areas near connections to major roads;
- the impact of haulage trucks using Park Road and local streets particularly around school start and finish times;
- the impact of “gridlock” resulting from vehicle collision on any arterial resulting in the redirecting of traffic, seen recently with the gridlocking of the city centre due to the closure of the Gateway Bridge;
- the need for an appropriate plan to accommodate the impact of traffic on access to KSHS by emergency vehicles;
- adequate fencing and barricading of schools;
- night lighting of construction areas near schools, particularly in winter;
- the establishment of a point of contact in regards to ongoing issues relating to the project.

Response

The Changed Project does not entail construction of tunnels beneath buildings at KSHS. The Kedron on ramp (east bound) passes beneath KSHS land fronting Park Road. The risk of disturbance to both KSHS and Woolloowin State School would be below the range of a "low probability of reaction" recommended in AS2670. Regenerated noise would comply with internal noise levels in AS2107 (see the Request for Project Change section 4.12 p102).

The Construction EMP requires night lighting at the boundary with sensitive receptors to be less than 8 lux. Night lighting for the Lutwyche worksite would be unlikely to impact on activities at either the Woolloowin or Kedron schools, particularly considering that most school activities occur during daylight hours.

Construction traffic management will be managed in accordance with the existing Coordinator-General's Conditions, in particular Schedule 3, Condition 5, for which it is noted that the Department of Emergency Services and Education Queensland are consultative bodies.

The Coordinator-General's Conditions provide that the construction vehicle EMP Sub-Plan should include as a minimum management of the spoil haulage fleet to:

- avoid or minimise and mitigate disruption to local traffic movements generally and particularly during peak traffic periods including school drop-off and pick-up times;
- avoid haulage vehicles queuing in proximity to schools;

- minimise and mitigate potential impacts from vehicle emissions upon adjoining premises and sensitive places;
- avoiding excessive noise from haulage vehicle operations within and at the immediate entries and exits of the worksites.

Proposed spoil haulage routes are identified in the Request for Project Change, and do not use Park Road and local streets around schools. Attention is drawn to the Recommendations and Conclusions in the Request for Project Change which recommended that spoil haulage be permitted only on motorways, and arterial roads and suburban routes as defined in City Plan, with spoil haulage permitted on other roads only where necessary for the most direct access to worksites and spoil placement sites to and from motorways and arterial roads.

A process for future consultation is already established by Schedule 3, Condition 1 of the Coordinator-General's Conditions.

4.16.2 Student welfare in accessing schools during construction

Submission

The submission provides that access for students and staff at schools must be safe and clearly delineated, conveyed to the whole school community well in advance of their use, particularly where any variation is made to access during construction, and illuminated for after hours access, particularly in winter months.

Response

As with the Reference Project, the Changed Project would be required to maintain safe access around the worksites, including those in proximity to schools, such as KSHS and Woolloowin State School. The Coordinator-General's conditions require that the Construction Traffic Management Sub Plan should, amongst other things, include measures to maintain safe and functional access to community facilities, such as KSHS, Woolloowin State School, Kalinga Park and to ensure pedestrian and cyclist safety and movements on routes adjacent to construction worksites. Through that process, specific measures will be included to ensure safe and functional access for the school community. Under the existing Coordinator-General's Conditions, Education Queensland is a consultative body for the Construction Traffic Management Sub Plan.

4.16.3 Impost on existing air conditioners from dust from construction worksites at Kedron State High School

Submissions

The submission is concerned about the impost on air conditioners by dust from construction areas.

Response

There would be no requirement, as a consequence of the Changed Project, for electrostatic filtration to be attached to air conditioners at either KSHS or Woolloowin State School.

The existing Coordinator-General's Conditions (Schedule 3, Condition 8) provide criteria for air quality management during construction and requirements for monitoring of performance against the criteria. Dust fall criteria are intended to avoid nuisance at nearby sensitive receptors. Furthermore, the conditions provide for an integrated system of complaints and corrective actions.

4.16.4 Compensation for schools for volumetric acquisition and impacts

Submissions

The submission raises concerns about volumetric compensation for tunnels beneath Woolloowin State School and KSHS

The submission contends that the construction of an indoor sports facility that meets the requirements of the school is not possible within the amount of compensation to be provided to the school due to the need to relocate existing facilities, realign the oval to accommodate the new building, upgrade of site power to accommodate the new building. The compensation package does not cater for construction on an unfriendly, flood prone and therefore high construction cost site.

Response

The State of Queensland has announced a \$5.5m assistance package for an indoor sports facility for Kedron State High School (KSHS) and for air conditioning at KSHS and Woolloowin State School, to cope with construction impacts.

4.16.5 Impact of construction on Kedron State High School ovals

Submissions

The submission is concerned about the potential impact on the oval space of KSHS during construction and suggests that the contractor needs to take photographic records of the oval and its precincts as a reference for post construction restoration.

Response

The Changed Project would have a reduced impact on the KSHS grounds, compared with the Reference Project, and would maintain access to Kedron Brook for curriculum and co-curricular activities.

Neither the Reference Project nor the Changed Project would impact on the KSHS oval.

In its relations with KSHS, the contractor may find it prudent to maintain a photographic record of the oval and the school grounds, despite there being no direct impact, nor any requirement as a consequence of the Changed Project.

4.16.6 Woolloowin State School pick up and set down facility

Submissions

The submission has raised concerns that the proposed pick-up and set-down facility outside Woolloowin State School does not have sufficient capacity to ensure safe operation and no queuing onto Lutwyche Road. The submission suggests that given the school frontage on Lutwyche Road, the pick-up and set-down area should be provided on school grounds.

Submitters have requested assurances that BCC will approve the proposed “Student set-down area” in front of the Schools (particularly Woolloowin State School).

Response

The design of the proposed student set down area off Lutwyche Road will be developed in consultation with BCC and Woolloowin State School representatives and will be designed in accordance with relevant policies. Brisbane City Council as the relevant authority will make its assessment in accordance with the applicable design guidelines.

The viability of the proposed set down facility will need to be considered against the potential for impacts that may result from queuing onto Lutwyche Road and resulting safety issues.

4.16.7 Proximity of ventilation outlets to schools

Submissions

The submission suggests that ventilation outlets should not be within 300m of the school.

Outfall will often be over the school and will impact on existing air conditioning that is not filtered. Australian Standards in this area are not based on rigorous scientific studies. Research in California over an extended period and multiple sites clearly indicates possible long-term health issues from exposure to ultra-fine particles.

Response

This issue does not arise as a consequence of the Changed Project.

Similar issues were raised in submissions on the EIS and were responded to in the Response to Submissions. The Response to Submissions found that the 300m separation buffer referred to in the submission has not been supported by technical analysis or research. It appears to be an arbitrary buffer and bears no relationship to research, literature or factual evidence.

The EIS presented findings that demonstrated that changes to ambient air quality as a consequence of operation of the ventilation system would be well below the goals established in the Coordinator-General's conditions. The Changed Project would have similar effects.

4.16.8 Potential redevelopment of the DES complex

Submissions

Impact of potential redevelopment of the Department of Emergency Services Complex on the operations of the KSHS.

Response

Any future redevelopment of the DES complex would need to achieve appropriate environmental management measures and, for development by an entity other than the State of Queensland, would need to be consistent with Brisbane City Plan 2000 and managed accordingly.

4.16.9 Emergency evacuation procedures

Submission

Evacuation procedures for schools should a major accident/fire occur in the tunnel.

In event of major in-tunnel accident/ fire, assumed the emission stack would be used to ventilate the tunnel to remove poisonous gases. Such emissions may fall over the school.

Response

As with the Reference Project, the Changed Project would be required to develop and implement an incident management plan in accordance with the Coordinator-General's conditions (refer to Schedule 3, condition 22). The incident management plan would be developed in consultation with Queensland Fire

and Rescue Service, the Department of Emergency Services and the Queensland Police Service, and nearby stakeholders such as Kedron High School.

4.17 Process Related Matters

4.17.1 Consultation Process

Submissions

Consultation process and access to information was frustrating. Difficult to get detailed technical advice on the impact of the completed project. Suggests that the general public's need for real information is not regarded highly in the progression of the project which is unsatisfactory, and could be considered negligent. Believe consultation process should be extended and access to technical experts made available for genuine consultation.

Disappointed with consultation as despite numerous visits to the Community Information Centre and discussions none of questions were answered or concerns addressed. Still awaiting contact from CNI and BC staff in response to issues/ concerns. Never been directly advised of changes and have had to source information myself, after finding out about the proposed resumption on Stafford Road on the news.

No information has been received regarding scope of work (i.e. hours of work) as staff working on the project are often unable to answer questions raised.

A six week consultation period is far too short for changes that involve material variations to existing alignments, materially impact on balance land requirements for future community development of the Lutwyche corridor, and make significant departures from existing project documents in order to provide quick fix solutions to the State Government and its investors. More public scrutiny is needed.

Response

The formal notification period extended over four weeks from 2 June to 30 June 2008. This was and is being supported by an informal process of extending information about the Changed Project to the community. This informal process is described in some detail in Section 2 of this response report, and includes maintenance of a Visitors' Information Centre, an email inquiry service and a free call telephone inquiry service.

4.17.2 Project delivery process

Submissions

Northern Busway and Airport Link are Public Private Partnerships. CNI was originally established to administer Airport Link only. The Changed Project Reports now makes the Coordinator-General and CNI responsible for the delivery of the Northern Busway in the Lutwyche Corridor.

Believe the State Government's judgement has become skewed since CNI became involved and it is more reluctant to engage in activities that are necessary for balancing competing public interests (e.g. effective community involvement in the design phase as currently recognised under CDIMP before these variations). The State Government appears to be bowing down to commercial pressure from its investors and public pressure it has essentially brought upon itself by putting the cart before the horse. Has resulted in a revised design which now gets it completely wrong for Lutwyche.

Response

CNI was established to administer the procurement of Airport Link and the Northern Busway. The Coordinator-General is not responsible for assessing the Northern Busway Project, however this project has been and continues to be the subject of extensive public consultation under the CDIMP process conducted by Translink prior to commencing procurement and CNI during the procurement process.

The Airport Link Project has also been through an extensive public consultation process, as documented in the EIS, Request for Project Change and this Response to Submissions.

Northern Busway impacts on Lutwyche are assessed through the CDIMP and CDIMP Change Report. The Airport Link Changed Project on balance provides improved outcomes for the Lutwyche area compared to the Reference Project.

The Airport Link Project has established an appropriate balance across all the Government's policy initiatives.

4.17.3 Community engagement

Submissions

Kalinga Community Group welcome inclusion in ongoing community consultation with BC and suggest that representative of the Kalinga Community Group be invited to participate in BC ongoing consultation for the Project.

A toll-free 24/7 telephone number should be provided to local residents to respond to all concerns about construction impacts with response time standards to be 2 hours for noise and air complaints, and 24 hours for other issues.

Regular consultation should take place with local residents about construction to provide detailed information about activities at each stage of the project, including timelines and likely impacts.

Crucial that the communities impacted by this project and other complementary infrastructure projects in the city's inner north are kept fully informed about project development issues and that appropriate measures are taken to ensure community concerns are monitored and responded to in a timely manner. Consideration should be given to providing additional resources to fund an appropriate locally based community agency/ network to more comprehensively and independently engage with government and the project consultants throughout the life of the project.

The importance of ongoing community consultations are maintained to ensure timely feedback about the effectiveness of measures taken and to ensure that the interests and concerns of residents and property owners are appropriately addressed.

Response

The Kalinga Community Group have been identified as a key stakeholder in relation to ongoing communication and consultation.

BC will be inviting community members to participate in ongoing community consultation and communication activities, including through Community Consultative Committees (CCC) as required by the Coordinator General's Conditions. Expressions of interest in relation to the CCC are expected to be invited shortly.

As required by the Coordinator-General's conditions, BC will establish a community consultation and communication process for the construction and operation phases of the Project. The consultation and communication process will include strategies to ensure community members and key stakeholders are provided with regular information about the project and construction activities, including timing, duration and likely impacts. A process for receiving and responding to community complaints will also be established which will include a 24 hour project information line and project email. Details of the project contact details will be advertised on the project website, in construction notifications, on project signage, newsletters and through the visitor centre.

Ongoing consultation with key stakeholders, including community facilities and sensitive land uses near to the proposed works, will be undertaken during the construction phase, to identify stakeholder issues and appropriate mitigation measures.

BC will also be required to prepare monthly reports on community complaints as part of an overall performance and compliance report posted on the Project website, in accordance with the Coordinator General's conditions.

4.17.4 Properties above the tunnels should be resumed

Submissions

Location of the property on the edge of the driven tunnel will have a negative impact on property value. Believe that all properties that the tunnels go under should be resumed at no loss to the owners and the area turned into "green zones".

Response

Part of the rationale for the underground tunnel solution as opposed to surface solutions is to allow existing land uses above the tunnel infrastructure to continue. The conversion of land above the tunnel infrastructure into "green zones" would cause large scale disturbance to existing land uses.

4.17.5 Request for Property Resumption – 5 Morris Street

Submissions

The submitter is concerned that all houses on Morris Street, other than their house, has been resumed and believe that this is a dangerous oversight given:

- volumes of spoil haulage trucks;
- predicted noise levels exceeding acceptable levels in their home, despite the noise wall along Morris Street;
- proximity (50m) to blasting for the cut and cover tunnel, within the 150 m exclusion zone for other tunnel projects (i.e. NSBT).

The submitter is concerned that voluntary acquisition as opposed to the involuntary resumption process, will exclude the submitter from receiving the same compensations as neighbours regarding hardship, removal costs, stamp duty, loss of future growth potential for property, particularly in light of the pending rezoning of the area to a residential sub-precinct which allows for residential buildings of up to 8 storeys. The submitter suggests that a market value assessment alone is not acceptable because they are not acting without compulsion in this situation.

The submitter contends that their home needs to be resumed in good faith, acknowledging that it will no longer be safe haven for their young children given unknown impacts of noise, dust and chemical pollution from construction works. Entitled to same levels of compensation as property owners whose properties have already been resumed.

Response

Property acquisitions for the Airport Link Project have proceeded through private treaty for properties thought most likely to be directly affected by the project. In addition, directly-affected properties will be acquired under the provisions of the *Acquisition of Land Act 1967*.

The circumstances of other properties not directly affected would need to be considered on a case-by-case where construction impacts may not be readily mitigated through the use of conventional measures.

The Coordinator-General's Conditions provide a comprehensive framework for the minimisation and management of predicted environmental impacts. This framework includes the establishment of a comprehensive process for community engagement, specifically to address the concerns of people who might reside or work near the project worksites and spoil haul routes. This framework provides for the establishment and implementation of an effective complaints, reporting and corrective action system. BC will be responsible for ensuring construction proceeds smoothly and without undue impact on people residing in Morris Street. Should this not be possible, then BC will need to develop reasonable and practicable measures to mitigate and manage the impacts of construction, in consultation with affected property owners and occupants.

4.17.6 Property resumption

Submissions

The proposal on display may be incorrect, property owners and public misled by CNI not making full and accurate disclosure of land required for project

The submitter suggests that they were advised by the Department of Main Roads in April 2008 that five lots at Brookfield Road would no longer be required by DMR/ CNI. The submitter was then further advised by DMR that portion of seven lots between the new road alignment of Stafford Road and rear boundaries of the seven lots would be sold back conditional upon land being amalgamated with five lots at Brookfield Road and vehicular traffic coming off Brookfield Road. The submitter was then advised in May 2008 that five lots would be required by CNI. The submitter contends that was told by CNI staff at the visitor centre that there were no further requirements on the land.

Response

This particular submitter's land is required for the relocated tunnel control centre, and was advised by CNI in May 2008 that the land would be required for the Changed Project. The submitter has had multiple discussions with CNI staff, and has been made aware both verbally and by correspondence of the land requirement.

4.17.7 Compensation

Submissions

Consideration needs to be given to broader compensation options of residents directly impacted such as a property value guarantee scheme.

Inability to receive a fair and reasonable price for the sale of property. The Changed Project is stressful to people who are directly affected, even though told that they are not.

Response

Property values are influenced by a broad range of factors, including external factors. No evidence has been provided in the submission that financial loss has occurred or will occur as a consequence of the Airport Link Project.

Where land is acquired for Airport Link, a person with an interest in that land has a right to compensation in accordance with the *Acquisition of Land Act 1967*.

5. Conclusions

The submissions received to the Request for Project Change raise a range of issues, generally within the following categories:

- raising issues directly related to changes brought about by the Changed Project;
- re-stating issues of concern that were raised in relation to the Reference Project when it was presented with the EIS, and which have been addressed in the Coordinator-General's report, recommendations and conditions; and
- raising other issues not related to either the Reference Project or the Changed Project, but which remain of concern to people living or working within the study corridor.

This response to submissions seeks to address all the submissions and issues raised.

Many of the changes proposed in the Request for Project Change arise in response to the Coordinator-General's recommendations that innovative steps be taken during the procurement phase of the Airport Link project to resolve design-based impacts such as those at Bowen Hills for The Mews apartments, the Clayfield ventilation outlet and the road infrastructure around the Kedron / Lutwyche interchange. Many of the submissions recognise the benefits in the changes, whereas others continue to express concern about local project impacts.

It is important to note that, for the most part, the conditions established by the Coordinator-General for the Reference Project are relevant to and required to minimise, mitigate and manage the effects of the Changed Project. Where additional conditions, or changed conditions are considered necessary to address the impacts of the Changed Project, they have been brought forward in the Request for Project Change.

Appendix A – Summary of Submissions

Community Submissions

Submission No. 2
Summary of Issue/s
The removal of the ability to head west along Stafford Road from Glenfern Avenue will incur considerable changes to resident's routes resulting in need to find alternative route to destinations using quiet residential streets in the area. Traversing into the Richmond Street right turn lane will also create traffic problems. Other return journeys from Stafford Road/Gympie Road will require a u-turn to enter Glenfern Avenue.
Proposed solutions include extending traffic light controlled intersection of Stafford Road and Richmond Street to include Glenfern Avenue or resume property at end of Glenfern Avenue and connect either Wood Street or Broughton Road and close of the Stafford Road intersection.

Submission No. 4
Summary of Issue/s
No issues raised. Request for further information.

Submission No. 5
Summary of Issue/s
Request that the main tunnel exit in Kalinga Park be covered so traffic noise (including cars and heavy vehicles) will be reduced for residents living on Alma Road. Sandgate Road entrance/ exit ramps may remain uncovered as traffic is travelling at lower speed with lower noise. Covering this component of the tunnel must reduce at least some noise associated with the introduction of the major traffic route and give more separation from the intensity of the corridor.

Submission No. 6
Summary of Issue/s
EIS and RfC Report fail to contemplate consequences arising from the presence of coal measures that lie in the path of the tunnels.
Coordinator General is required to make conditions that contemplate extraction of coal during construction. A further RfC Report and application accounting for effects of coal extraction is required, including further public submission period.
Where Airport Link traverses or is proximate to coal measures, environment, health and safety rules and regulations applicable to extraction of coal are to be applied to minimise environmental, health, safety and financial risks.
<ul style="list-style-type: none"> • Design, construction and design life operation plans should be submitted to Dept of Mines and Energy for consideration by the Coal Mining Inspectorate. • Ensure that tunnels will not enter or be proximate to old coal mining workings. • all works and ongoing operations should be insured to the full potential damage extent. • use of non-coal/ non-intrinsically safe equipment to bore or convey coal on or about a built up residential area, and methods of proposed boring, should be formally disclosed to all insurers and underwriters and financiers of Airport Link. • appropriate investigations should be undertaken and reported on to ensure acceptable levels of risk are achieved. • all geological cores and geological results should be submitted to the Dept of Mines and Energy for entry into the Queensland geological database. • Government must be indemnified by BrisConnections for damages resulting in the event of closure of Brisbane Airport and financial losses that may be suffered by BAC and aircraft operators.
Environmental and safety construction measures must be adopted that prevent incidence of coal measure "heating" or explosion during construction and operation.
Prior assessments made by Commonwealth Minister for Environment and Heritage under the EPBC Act precluded consideration of deposition of spoil containing coal waste on Federally controlled airport land. Presence of coal alters risk and probability of silting in Airport Ramsar Wetlands. Coal by-product conveyed to Airport fill site triggers requirement for a re-assessment under EPBC Act. Re-assessment whether deposition of coal water on Federal Airport land should constitute "controlled action" must occur. RfC must be submitted to Commonwealth Minister for Environment and Heritage for re-evaluation under EPBC Act, particularly as may effect sensitive Airport Ramsar Wetlands.
<p>Grounds of submission:</p> <ul style="list-style-type: none"> • Neither EIS nor RfC account for presence of coal in tunnel path. • extraction of coal and interaction with coal measures not contemplated in EIS. • The EIS and RPC did not contemplate use of non-intrinsically safe TBM's and non Fire Resistant and Anti-Static conveyances to drive coal measure in and around tunnel path. • Airport Link and Brisconnections admitted that coal present in path of tunnel

<p>construction, carbonaceous shale was present in the path of the tunnel, TBM's will be boring through coal measures in Clayfield and the Minister of Mines and Energy Safety Division would have to be consulted.</p> <ul style="list-style-type: none"> • Dept of Mines and Energy Coal Mine Safety determined that no enquiry had been made. • RfC altered trajectory of tunnels and introduced proposal to operate two TBM's. • Various new risks arise that not contemplated in EIS and RFC (i.e. environmental and safety implications of presence of coal) and did not contemplate opening two co-incident working faces. • no express consideration made of foreseeable risks associated with presence of coal measures. • each of entities involved in Airport link delivery are subject to common law and statutory duties and Directors of each involved entity subject to various duties.
<p>Foreseeable, environmental and safety risks in the event that appropriate precautions not be adopted in relation to extraction near coal measures include:</p> <ul style="list-style-type: none"> • potential multiple fatality of workers in event of coal seam fire. • in the event of coal seam fire or related conveyor fire, smoke exhausted from tunnel entrance near Sandgate Rd, or fire in coal by-product in certain atmospheric conditions may cause closure of airport. • in event of coal fire seam the resultant loss of tunnel wall strength and coal seam strength may cause underground and surface subsidence that could affect properties and property values. • loss of equipment, prolonged re-entry in tunnels or necessity for alternative re-entry tunnel could cause environmental conditions not contemplated by EIS or RfC.
<p>Non comprehensive summary of precautionary practices might incorporate:</p> <ul style="list-style-type: none"> • confirmation studies that Airport Link tunnels not intersect old coal mine workings • examination of ventilation arrangement and employment of methane/ flameproof ventilation fans, during and after construction, particularly in Clayfield. • examination of Second Means Egress in event of underground fire • consideration of positive -v- negative pressure ventilation fan alternative from underground operations • consideration of differential ventilation pressures on coal measures in, about or between tunnels • consideration of permanent employment of coal seam gas monitoring equipment • establish emergency plans in event of mine fire/explosion by products exhausted by fan, portals and topographical breaches. • use of intrinsically safe mining equipment for coal excavation. • employment of Fire Resistant and Anti-Static conveyor belt in tunnels • control of coal spillage and dust from conveyors or scrapers transfer points • preparation for emergency installation of coal fire extinguishing equipment.
<p>EIS and RfC do not express that the owner of Airport Link land obtained a Water License in accordance with provisions of Water Act 2000. Owner of land in which Airport Link will be constructed is compelled to have interest registered with the Lands Title office.</p>
<p>Construction of Airport Link will cause taking of water or interfering with flow of water on, under or adjoining land. Owner will be required to apply for water licence prior to taking of water or interfering with flow of water on, under or adjoining land. Approval to proceed must not crystallize until licence to take water has been obtained.</p>

Grounds of Submission:

- surface and underground water will be taken and/or interfered with as tunnels constructed.
- Water drawdown will occur.
- EIS touched upon need for formal water entitlement.
- EIS not current with respect to water and RfC fails to express any reconsideration of position.
- Water Resource (Moreton) Plan 2007 came into force as of 16 March 2007.
- Owner of Airport Link land is required to make water licence for application for water that will be taken or interfered with during construction and operation.
- RfC correctly nominates requirement for making of application to obtain a permit to destroy vegetation, excavate or fill in watercourse, lake or spring.
- Prior to taking of any water, owner of land must obtain appropriate water licence under Water Act 2000.

Submission No. 10

Summary of Issue/s

Request for Project Change needs to seriously consider appropriate control methods to minimise noise generation during the construction phase. Concerned this issue is not effectively covered.

While dust suppression is considered in the Request for Project Change, if recent weather conditions prevail, dust will become a major issue for residents in close proximity to the construction area. Proactive dust management measures need further investigation in the change report.

Concerned with construction impacts (i.e. noise, dust, security and social change)

Concerned with operation impacts (noise, air quality and visual amenity).

Submission No. 11

Summary of Issue/s

The proposed cut and cover of the tunnel through Kedron Brook increases the risk to water quality during construction and would result in major works in the Brook, including diversion of flows. The EMP should be modified to take into account the changes in the crossing of Kedron Brook and additional area of disturbance on the southern side of the Brook. Maintenance of flows and protection of water quality (particularly turbidity) are of primary importance.

Area of disturbance which drains to Kedron Brook/ Schulz Canal will be increased. Risks of sediment from runoff or spillage from the proposed conveyor or truck loading will need to be

managed. The EMP for the Clayfield/ Kalinga Park worksite should be revised to protect water quality in Kedron Brook and Schulz Canal.
Proposed changes to the project at Kalinga Park (i.e. burying the ventilation outlet, spoil conveyor, realignment of the bikeway, extension of rehabilitation area between Sandgate Road and Melton Road) is supported.
Conveyor increases the risk of spoil being spilt during operational upsets which could end up in the Brook/ Schulz Canal. Recommend operational plans for the conveyor system include contingency for spillages and emergency stockpiling during upset conditions.
Note that noise impacts from the conveyor are deemed "unlikely", although this is in relation to human and not animal perceptions, so support and further encourage mitigation measures in relation to noise impacts from the conveyor.
Pedestrian and cycle access across Melton Road is currently hazardous but is not addressed in this proposal.
Recommend that the area of rehabilitation between Sandgate and Melton roads be maximised, particularly on the northern side of Schulz Canal, where it should extend at least to the alignment of the Airtrain towers.

Submission No. 13
Summary of Issue/s
Construction and operation impacts on Kedron State High School are matter of considerable concern to everyone in the school community.
Impact of the school as presented to the public must be preserved during and post construction (i.e. fencing/ barricading needs to be of an acceptable standard in order to maintain positive image of the school).
Student and staff access to the school site must be safe and clearly delineated in terms of pedestrian paths and set down areas. These areas need to be conveyed to the whole school community well in advance of their use and need to be illuminated for after hours access (particularly during winter). When variation made to access path, should be staff located to direct students onto the new pathway (i.e. not acceptable to just rely on signposting as some refugee students have poor English).
Noise and vibration levels need to be constantly monitored and if unacceptable, addressed immediately. Continuity of the learning environment is critical and disruptions during exam periods cannot be allowed to occur.
Building status reports need to be collated for reference to post construction and any damage

needs to be rectified.
Contractor needs to take photographic records of the oval and its precincts as a reference for post construction restoration.
No mention of volumetric compensation for the undermining of the school site for the new tunnel path. This must be resolved prior to work commencing.
Unclear what emergency procedures will be in place in the event of a major incident (at the surface or underground) that necessitates rerouting traffic around the school site and decreasing vehicular, cycle and pedestrian safety.
Must be guarantee that [spoil] "haul trucks" will not use Park Road at any stage. Heavy haulage vehicles should be prohibited from using local streets, particularly Park Road, and particularly at school start and finish times.
Safety access to the school by emergency vehicles can not be restricted and an appropriate plan should accommodate the impact of traffic congestion on such access.
DES redevelopment already impacting on the school site and access to it (i.e. loss of parking). Decisions are made without consultation and without full regard to the safety and learning environment for students.
Vehicular (particularly heavy vehicles) has increased dramatically since original data was collected during EIS.
Ventilation stack is too close to the school. Outfall will often be over the school and will impact on existing air conditioning that is not filtered. Australian Standards in this area are not based on rigorous scientific studies. Research in California over an extended period and multiple sites clearly indicates possible long-term health issues from exposure to ultra-fine particles.
Failure to include filtration of the emissions is unacceptable. Adverse impact on student health may not be realised for many years while effect accumulates. Knowing that this risk exists and not appropriately addressing it will have serious consequences for those impacted, and for decision makers approving the project.
In event of major in-tunnel accident/ fire, assumed the emission stack would be used to ventilate the tunnel to remove poisonous gases. Such emissions may fall over the school.
Electro-static filtering attached to air conditioners adds greatly to cost and reduces capacity of the schools to mitigate effectively with current compensation.
Construction of an indoor sports facility that meets the requirements of the school is not possible with the amount of compensation provided to the school as relocation of existing facilities, realignment of existing oval to accommodate the new building, site power upgrade to the new building will erode allocation to point that improbable that a building of any consequence may be constructed. Compensation package does not offset a very unfriendly,

flood prone, high-cost, expansion site.

Submission No. 14

Summary of Issue/s

Consultation process and access to information was frustrating. Difficult to get detailed technical advice on the impact of the completed project. Suggests that the general public's need for real information is not regarded highly in the progression of the project which is unsatisfactory, and could be considered negligent. Believe consultation process should be extended and access to technical experts made available for genuine consultation.

Location of the property on the edge of the driven tunnel will have a negative impact on property value. Believe that all properties that the tunnels go under should be resumed at no loss to the owners and the area turned into "green zones".

Tunnels described in the project should be constructed along the lines of Lutwyche Road and other existing roads and green areas that exist (i.e. Kalinga Park) to minimise future impact on residential properties.

No certainty that the construction of the ramps underground beneath Kedron Brook and Lutwyche in the vicinity of Woolloowin State School and St Andrews Anglican Church would result in a reduced impact on urban amenity for all the residents in Lutwyche. Significant concern that the tunnel to access the Gympie-Lutwyche that is to pass on the edge of my property will have significant impact on the stability of the land between the tunnel and the units and also on the noise and vibration for residents of properties in the area when the tunnels come into operation. Will have significant impact on the "urban amenity".

Changes to the alignment of the mainline tunnels will have significant impact on the noise and vibration experienced by residents above the areas of the tunnels when the tunnels come into operation. Report does not address these issues.

Concerned about the disruption and impact of vibration and noise during the construction phase, particularly the construction site at Chalk Street.

Submission No. 15

Summary of Issue/s

Object to the opening of Swan Street to traffic at the intersection with Stafford and Gympie roads. Find it disappointing that after such recent public opposition to the opening of Swan Street at this intersection, the State Government is again including the proposal in a road development plan. Residents of Gordon Park do not want Swan Street made available to rat-

runners seeking an alternative route to bypass traffic on the main roads. Increased traffic in this street will have negative impact on safety and amenity.

Proposal to permanently close part of the off-leash area to build a duplicate cycle path on the northern bank of the brook will significantly reduce the size of the dog park, and is an unacceptable loss to the community. Seek assurance that after construction, the cycle path on the south side of the creek will be restored and the duplicate cycle path constructed on the north side will be removed. Seek assurance that the reduction of the dog off-leash area to allow cycle traffic on the north side of Kedron Brook is only a temporary relocation to facilitate construction, and that the dog off-leash area will be returned to its previous configuration.

Submission No. 16

Summary of Issue/s

Concerned that all houses on Morris Street, other than their house, have been resumed and believe that this is a dangerous oversight given:

- *volumes of spoil haulage trucks
- *predicted noise levels exceeding acceptable levels in their home, despite the noise wall along Morris Street
- *proximity (50m) to blasting for the cut and cover tunnel, within the 150 m exclusion zone for other tunnel projects (i.e. NSBT)

Concerned that no acoustic shed is being built to mitigate construction noise from the Windsor worksite.

Concerned that noise and pollution levels from construction site and truck haulage is not able to be quantified.

Concerned about proximity to blasting and potential impact on their brick home and potential for damage from debris from blast sites, despite the use of blast mats.

Concerned about their children's health and well-being given proximity to construction works.

Concerned that voluntary acquisition as opposed to involuntary resumption process, will exclude us from receiving the same compensations as our neighbours regarding hardship, removal costs, stamp duty, loss of future growth potential for our property, particularly in light of the pending rezoning of our area to a residential sub-precinct which allows for residential buildings of up to 8 storeys. A market value assessment alone is not acceptable because we are not acting without compulsion in this situation. Being forced to move because there is a clear and present danger to our family as identified.

Home needs to be resumed in good faith, acknowledging that it will no longer be safe haven for their young children given unknown impacts of noise, dust and chemical pollution from construction works. Entitled to same levels of compensation as property owners whose

properties have already been resumed.
Not satisfied that a thorough investigation into alternate truck routes for spoil removal from the Windsor worksite has been conducted. Use of suburban streets is easiest option, but not smartest. Suggest that similar spoil removal methods as NSBT are implemented (i.e. exiting the site directly onto Lutwyche Road, at or near the intended Lutwyche Road entrance point). Current proposal (i.e. making Morris Street one way, removing on-street parking and erecting a noise fence in the middle of the road) is not a liveable option.
Noise and constant disruption due to the proximity of construction and vehicle movement is of great concern. Mitigation of noise impacts should include a soundproof tunnel for trucks to pass through.
Not convinced that living in air-condition environment 24 hours a day is good for health. Normal air-conditioning treatments are not designed to filter such high levels of pollution. Would require home to be fully ducted air-conditioning in every room and compensated for any extra electricity used.
Would need water tank or special dispensation to use town water to wash down vehicles, and/or house due to dust. Compensation should also be paid for use of professional house-cleaners.
Double-glazing would be ineffective on house. Extra sound barriers may need to be installed.
Request air tester and sound monitor to be placed within the vicinity of house with weekly reports on dust and noise levels.
Request building inspection with photographic detail to document any future damage to our property from the heavy machinery and blasting and an independent study on the possible effects to a brick home of the blasting. If there is a possibility that structural damage could occur, this will compromise our ability to provide a safe home environment for our children and will not be tolerated.
Require the construction of a new higher fence for our property as an additional sound barrier.
A sound barrier must be placed along the entire length of the footpath on the western side of Morris Street. This should be visually pleasing from our side, similar to the high fence erected between McDonalds and Newmarket road on Lutwyche Road.
A two-hour parking limit should be enforced in our area, with permit parking only to ensure construction workers and other residual long term car-parkers do not abuse our local streets.
A line of fast growing lilly-pillies or a similar fast growing high hedge must be planted and maintained on the footpath outside our home to provide a natural pollution screen for our home.
All construction lights must be shielded so that no on-site lights are shining on to Morris

Street.
Major concern is the resale of our property and the loss of potential earnings if required to sell during construction. Want to be compensated for sale of property at a reduced rate due to construction work.
We want listed any possible hazardous materials that will be stored, used or moved through the worksite and detailed explanation of types of explosives being used and the necessary exclusion zone.
Require list of all houses with asbestos through them, which require hazardous waste material removal and want to be notified in advance when those buildings are being removed.
Must be compensated for the loss of public parkland for the duration of the project, considering that we are frequent users of Mann Park.
A traffic light system must be in place for us to exit and enter our area at all times during construction. At no time must Bryden Street be our only way of exiting the neighbourhood because it is too dangerous to turn right onto Lutwyche Road from Bryden Street.
Insist that the new Gallway Street be finished as a priority before Federation Street is closed to traffic and that traffic lights be installed on Gallway Street that support a designated right turning lane into Gallway Street and left and right turns out of Gallway Street.

Submission No. 18
Summary of Issue/s
Ramifications of the Airport Link Project will have direct impact on residents of Glenfern Avenue. Planned changes to Stafford Road will mean that access to and from Glenfern Avenue will be further restricted by the addition of an extra turn lane into Richmond Street. Removal of right turn into and out of Glenfern Avenue will further inconvenience residents, particularly as Stafford Road is only entry and exit point. Removal of right turn will force residents to use back streets to get back to desired destinations causing severe inconvenience to residents. Left turn entry will force traffic to negotiate a u-turn at some point if coming along Stafford Road from Gympie Road. Of the opinion that the Project's brief to alleviate local traffic and enhance safety in streets is not met by the current plan.
Proposed by some residents in Glenfern Avenue that the traffic lights presently at Richmond Street be extended to include Glenfern Avenue, allowing residents to enter and exit more easily and safely.

Submission No. 19
Summary of Issue/s
Concerned about the protection of significant historical features of the church (i.e. Lyche Gate, front boundary stone wall). Request that pre and post construction reports are conducted of the church and other important features in its grounds.
Concerned that the front steps of the church and the Lyche Gate and front wall are not underpinned and may be easily affected by tunnelling. Request that the steps are reconstructed with foundations and provide additional protection to the Gate and front wall to help them withstand the tunnelling vibrations.
Protection of income for the church from wedding and funeral services, particularly during construction. Request for air-conditioning to be fitted to the church to mitigate the downturn.
Concerned about impacts of pollutants from the operation of the tunnels.
Concerned about impacts of dust and maintaining the church's external appearance. Request cleaning of the building to remove dust.
Church concerned to ensure the busway station presents a visual impact in keeping with the church and locale. Request that the busway station design (to the extent it impacts on the streetscape in the locale) be provided to the Archbishop's Buildings and Furnishings Advisory Committee for consultation.

Submission No. 20
Summary of Issue/s
The N&DHS recognise that the Toombul connection would prevent restoration of the last 30 m of Diggers Drive, and propose that the new bikeway should follow the original alignment of Digger's Drive as closely as possible. Proposed cycle way does not reinstate the eastern end of Digger's Drive but does include a bridge connection across the canal from Stuckey Road to Parkland Street. N&DHS does not object to the construction of the proposed bridge over Schulz Canal but cannot see that this should obviate the need for another bridge across the canal closer to Sandgate Road as proposed by N&DHS.
The Society notes a restored part of Kalinga Park green space will abut the north-western corner of the intersection of Airport Link and Sandgate Road and suggest that a set of stone or concrete steps be built on this slope to form an eastern entrance to Kalinga Park to replace the entrance lost about forty years ago following the destruction of the nearby Digger's Drive bridge.

Submission No. 21
Summary of Issue/s
Concerns with work carried out on exit/entrance of Airport Link Project at Toombul end of the project, include: <ul style="list-style-type: none"> • dust particles generated while the spoil is taken excavation area and when earth embankment being filled in the Toombul Shopping Centre car park • construction noise • increase in traffic passing house, and impact on quality of life • fallout of exhaust particulars • devaluation of land value due to proximity to ventilation stack.
Suggest the following remedies to mitigate impacts: <ul style="list-style-type: none"> • air-conditioning throughout home to minimise dust during construction and emissions from ventilation stack • annual financial contribution for running cost of air-conditioning • double glazed windows to alleviate noise during construction phase and operation. • clear, see through sound barriers along southern side of East West Arterial to replace current ineffective wooden sound barriers. • external walls of house washed monthly during construction to remove dust and roof cleaned at end of construction phase. • filtration system installed on ventilation stack minimise impact of exhaust particles on surrounding residential area and environment • financial compensation for devaluation of my land by having ventilation stack within 300m.

Submission No. 24
Summary of Issue/s
Disappointed with consultation as despite numerous visits to the Community Information Centre and discussions none of questions were answered or concerns addressed. Still awaiting contact from CNI and Brisconnections staff in response to issues/ concerns. Never been directly advised of changes and have had to source information myself, after finding out about the proposed resumption on Stafford Road on the news.
Concern about impact of dust from construction works on my home, car and year and loss of current ability to hang washing out to dry
Concern about air quality and pollution and impact if forced to keep windows closed during construction works and operation of tunnel (i.e. dust, air quality, noise and pollution) will make house unliveable
Impact of noise, lights and privacy with demolition of adjoining properties on Stafford Road. What is the exact type and height of screening/fencing that will be erected during construction work and function during operation.

Probability of land directly behind property being used as construction compound once houses are demolished.
Construction program, timing, hours of operation, e.g. night works/early starts.
Traffic movements in and out of the area, including delays, construction vehicles and congestion during construction.
Security measures to be implemented during demolition of adjoining properties.
Concern about structural and aesthetic condition of property and need for a dilapidation survey to be undertaken prior to works commencing, also concerned about proximity of tunnelling machines and possible damage to property.
Concern about potential decrease in property value due to proximity of construction works and entitlement to compensation.
Probability of adjoining land being used as car parking for the Tunnel Control Centre, and potential impacts on privacy, glare from lighting, noise and security. Access to the Tunnel Control Centre and car parking area.
Probability of a tunnel entry from Stafford Rd located behind property with only protection of Tunnel Control Centre car park. Received no definitive answers regarding noise levels, screening/fencing and landscaping.
Concern about operational noise from increased traffic on Stafford and Gympie roads and from car park/tunnel entry, and possible need for double glazing on windows.
Projected increased traffic movements in and out of the area.
Inability to receive a fair and reasonable price for the sale of property. The Changed Project is stressful to people who are directly affected, even though told that they are not.

Submission No. 26, 42
Summary of Issue/s
The proposed Clayfield/Kalinga Park worksite will block existing access from the southern side of Schulz Canal/Kedron Brook for Clayfield/Eagle Junction residential community to Kalinga Park pathways, recreations areas, Centro Toombul and Toombul railway and bus stations, which is currently provided from Stuckey Road. If proposal requires relocation of public footpath from southern side of Shultz Canal to northern side, access to relocated footpath will need to be maintained to replace current Stuckey Road entry point. Suggest that access be maintained into Kalinga Park through temporary or permanent footbridge installed adjacent to Parkland Street to provide access to relocated northern pathway in order to

maintain resident's accessibility to community and transport facilities.
Lack of air quality data is significant gap in proponents and Brisconnections ability to address community concerns about air quality impacts. Suggest that monitoring station commence immediately with installation before major work begins in 2008, in order to provide Kalinga Park air quality baseline data.
KCG welcome inclusion in ongoing community consultation with Brisconnections and suggest that representative of KCG be invited to participate in Brisconnections ongoing consultation for the Project.
Inclusion of Airport Roundabout is logical progression, some concern that funding to address this extension diverted away from providing more sustainable solution to Clayfield stack location, particularly as initially advised that roundabout "was not in the project scope"
Change proposal recommendations for stack location and fan complex in Alma Road are welcomed by residents in Alma Road (i.e. removal of industrial fan complex, reduction of outlet stack size). Concern remains that bidding companies constrained in ability respond to reference design, as did not reflect community concerns expressed over several year in terms of stack location in residential community; and in fact misled residents in EIS consultation phase about proposed locations. The construction of an 8-storey stack in predominantly tin and timber low density residential community will continue to draw ongoing community concerns for both proponents and operators of Airport Link, concerns only escalate when stack built and towers over homes for several kilometres in Clayfield and Hendra. No amount of urban design will hide stack because it is so out of character with surrounding community.

Submission No. 27
Summary of Issue/s
No information has been received regarding scope of work (i.e. hours of work) as staff working on the project are often unable to answer questions raised.
Traffic lights should be placed at Gallway Street and Lutwyche Road to ensure that motorists and can enter and exit safely, including left and right exit, and right turn light from Lutwyche Road. Change to streets will affect Morris Street, Federation Street and Gallway Street.
Closing Federation Street will cause problems, including slowing of traffic out of the street in peak hours, safety concerns for elderly and children. No consideration to future development in this pocket.
It is likely that traffic will bank up at Cartwright Street waiting to do u-turns, causing congestion to other road users.
Moving the bus station closer to Horace Street will slow traffic onto the ICB. Bringing the bus

station closer to Federation Street will be more practical and will provide safer and easier access for increased future population.
The removal of traffic lights on Lutwyche Road is not logical with future population increase and increase in bicycle traffic.
Need assurance that all trucks will cover their loads and that noise, dust and any structural movement must be within acceptable levels.
Residents should be allowed special watering times (i.e. at least one hour twice a week) as dust will kill lawn and plants during construction.
Parking in front of houses is required to be restricted to residents and resident's visitors only at all times.
Have not received any technical information in relation to the stack.
Pest control should be conducted in surrounding residences when houses are removed as vermin are likely to be disturbed by activities. Seek compensation as feel property will be unrentable.
Request the small deck of our flat be completely enclosed with blinds to prevent dust settling, two small windows be double glazed and air-conditioning installed in the flat.
Require temporary relocating at any stage throughout construction and rent and all costs relating to relocation compensated.
Home should be washed every two months to remove dust and grime and to protect recent paintwork.
Will seek compensation to any damage to property.
Seek compensation for washing cars monthly.

Submission No. 28
Summary of Issue/s
<p>Use of Rode Road as a spoil haul route is likely to pose potential safety risks, given the projected increase in heavy vehicle movement through a predominantly residential area, particularly safety implications for:</p> <ul style="list-style-type: none"> • Wavell Heights Family Day Care at Rode Road • roundabout of Rode/Bilsen/Edinburgh Castle roads (i.e. current size and design may be inappropriate to cope with projected traffic increase) • cyclists and pedestrians.

<p>Unclear what the tidal flow impacts of the increase in heavy vehicle movements will have on network performance, particularly at:</p> <ul style="list-style-type: none"> • Rode Road/Sandgate Road • entrance to Nundah Tunnel • Sandgate Road/Grace & Collins streets • entrance to Toombul Shopping centre
<p>RfC Report does not appear to account for differing gradients of the road network which (especially at night) would have a significant impact on noise levels at sensitive locations.</p>
<p>RfC Report does not appear to provide information on impacts on air quality during construction from projected increase in heavy vehicle movements.</p>
<p>RfC Report does not appear to provide information on impacts (i.e. air quality, noise, traffic) that Northern Haul Route will have on residents and community in general if this is used during construction.</p>

<p>Submission No. 29</p>
<p>Summary of Issue/s</p>
<p>Opposed to the proposed reopening of Swan Street, as part of the proposed changes to the Stafford Road/Gympie Road intersection. If this is allowed to happen, traffic would increase significantly, not only to local traffic but to 'rat runners' and put the safety of locals at risk. The reopening of Swan Street to any cars must be prohibited. Residents could continue to access Stafford Road via Rose Lane. Commercial buildings on corner of Stafford Road/ Gympie Road could be purchased to provide better planning options for buses to access the busway.</p>

<p>Submission No. 32</p>
<p>Summary of Issue/s</p>
<p>Upon buying this property less than 18 months ago, we believed that our property would not be affected, nor that the properties on Stafford Road were earmarked for resumption. Currently understand Tunnel Control Centre will be built on land behind property, after houses resumed and demolished.</p>
<p>Visited the Community Information Centre and have not been able to get straight answer to when homes will be resumed, how long they will remain empty, when tunnel control centre will be built, how drilling of tunnel will affect home. Never been directly advised of changes and found out about the proposed resumption on Stafford Road on the news.</p>
<p>Concern about impact of dust from construction works on my home, car and year and loss of current ability to hang washing out to dry. Solution may be provision of clothes dryer,</p>

including contribution to increased power bill for use and monitoring of the condition of property, house washing/ cleaning and repainting to occur if deemed necessary.
Concern about air quality and pollution and impact if forced to keep windows closed during construction works and operation of tunnel (i.e. dust, air quality, noise and pollution) will make house unliveable. Solution will be provision of air conditioning, including contribution to increased power bill.
Impact of noise, lights and privacy with demolition of adjoining properties on Stafford Road. What is the exact type and height of screening/fencing that will be erected during construction work and function during operation. Suitable solution would be landscaping on property side of fence, and six foot sound-proof fencing.
Probability of land directly behind property being used as construction compound once houses are demolished.
Construction program, timing, hours of operation, e.g. night works/early starts.
Traffic movements in and out of the area, including delays, construction vehicles and congestion during construction.
Security measures to be implemented during demolition of adjoining properties.
Concern about potential decrease in property value due to proximity of construction works and entitlement to compensation.
Probability of adjoining land being used as car parking for the Tunnel Control Centre, and potential impacts on privacy, glare from lighting, noise and security. Access to the Tunnel Control Centre and car parking area.
Probability of a tunnel entry from Stafford Rd located behind property with only protection of Tunnel Control Centre car park. Received no definitive answers regarding noise levels, screening/fencing and landscaping.
Concern about operational noise from increased traffic on Stafford and Gympie roads and from car park/tunnel entry, and possible need for double glazing on windows.
Projected increased traffic movements in and out of the area.
Inability to receive a fair and reasonable price for the sale of property.

Submission No. 33
Summary of Issue/s
Airport Link will significantly change our suburb and direct impact on our property, as outbound tunnel is directly under our house and swimming pool.
Lack of tunnel emission filtration and effects on public health and air quality modelling shortcomings. EIS selection criteria for locating ventilation outlets is to "avoid proximity to sensitive receptors" (i.e. aged care, child care, schools). Statement from Coordinator General required as to why not followed own EIS selection criteria with both ventilation outlets located close to schools and densely populated localities without filtration. Statements in the EIS about surface roads and tunnels and tunnel filtration are mute points and general opinions not held by practitioners working in area of air modelling. Qld EPA do not list "approved" air dispersion models in EPP (Air) (1997). Major flaw presented in air modelling scenario. Queensland Government must act responsibly in a manner that prudent avoidance is required to prevent detrimental public health occurring as result of harmful polluting particulates being emitted from the tunnel ventilation outlets. State has an "environmental duty of care" to protect people from harmful micro-particulates emitted from ventilation outlets.
Concern that medical reference to fine particulates, air pollution and the link with cardiovascular and respiratory diseases are not cited in the air quality reports even though copy provided to Community Consultation Team. Serious dangers to public health from ultra-fine particulates and fine particulates.
Recommended that electrostatic precipitation filters be installed on all tunnel ventilation outlets. In doing so, State has acted in a responsible manner and its "environmental duty of care" has been conducted.
Property impacts stated in the EIS minimise impacts 'to protect people's livelihoods, lifestyle and local amenity'. Consideration needs to be given to broader compensation options of residents directly impacted such as a property value guarantee scheme.
Object to current tunnel route alignment as has had major impact on property value. Statement by reference project team during community consultation that the fixed reference project would not move more than a few metres from this fixed alignment was obviously false and misleading. All previous alignments did not directly impact on our property and it would make sense to relocate the alignment (to State owned properties) so that the impact on residential properties could be quarantined and at least five properties would not be affected. Properties that would be affected are tenant occupied properties.
A statement is required from the Coordinator General about what will occur in relation to dangerous goods vehicles and if a terrorist event, serious accident or serious fire occurred within the tunnel.

Submission No. 34
Summary of Issue/s
The 1999 paper resulted in an electrostatic filter being installed in the Neville Bonner building due to indoor health concerns as well as preventing a child care centre being included within the precinct as a prudent avoidance measure.

Submission No. 35
Summary of Issue/s
Insufficient consideration has been placed upon the environment that will be left once construction of Airport Link and the Northern Busway have been completed and then how these areas can and will be redeveloped to maximise the return on investment for this infrastructure.
Concern for the Northern Busway is to ensure that the highest and best use of land in immediate proximity of busway stations can occur without impediments to development.
Both the CDIMP and Northern Busway Change Report and the resultant design outcomes are heavily biased towards the engineering and physical aspects of building and operating the busway. cursory consideration only has been given to other key planning processes being undertaken by other authorities, which are critical to the 'operational' phase of the busway. CDIMP has not considered any of the proposed land use changes of the draft Lutwyche Neighbourhood Plan. Current alignment failed to consider the urban planning implications.
The Busway warrants and requires medium to high density development around the busway stations to deliver the volume of people required to maintain regular services. The approach currently adopted by BrisConnections and further within the original CDIMP has designed for sufficient development around the station entrances, but has been restricted in providing commercial solutions within its proposal. Large pedestrian plazas are a waste of land that should be highly activated and used for high density mixed use developments. Do not believe that the nominated character is that required to deliver a successful operating outcome for the station and is contrary to best practice. Ability to achieve a level of built form over and above the plazas is considered possible whilst achieving the visibility and functional access obligations. Suggest BrisConnections work with existing proponents of these sites to ensure that post-development they can and are developed in this manner.
Some of the changes to the proposed projects certainly deliver innovation, but that in some instances this will result in poor quality outcomes for future land use and development in Lutwyche (i.e. adoption of a system of underground ramps and less intrusive portals in lieu of surface road connections may sterilise the land above those tunnels) and may limit or constrain future development and redevelopment in Lutwyche.

The combination of the nominated pedestrian plazas and the area taken up by the actual busway tunnels means that three significant sites within the Lutwyche Centre have now been essentially left significantly constrained for future development.

The future built form of the original busway station sites (i.e. between Chalk and Bradshaw streets) will need to be determined now, so that structure issues can be considered and incorporated into the design prior to the construction of the busway. If this doesn't occur, the sites will be rendered un-developable due to construction implications of building over the busway tunnel (i.e. construction of 10 + storey building). Redevelopment potential may be further prevented due to the inability to provide any basement parking. This situation is also relevant for the site on the western side of Lutwyche Road.

Suggested actions as a potential way forward include:

- allows for retail and high density residential over 572-614 Lutwyche Road.
- consider simple framework for 572-614 Lutwyche Road and BrisConnections for design options that meet the Queensland Government objectives under the Regional Plan and City Shape.
- provide a framework to explore opportunities to consider integration of the proposed busway infrastructure within the potential sub-basements of the effected land holdings without compromising the critical path of the projects and delivery of the infrastructure by 2012.
- minimise impacts and maximise benefits proposed for 572-614 and 561 Lutwyche Road as they relate to the draft LAP for Lutwyche and intent of BCC.
- explore opportunities over 572-614 and 561 Lutwyche Road to demonstrate key development options within a complete master planned approach.
- Provide design options for a more seamless link between the proposed infrastructure, key existing amenity and new amenity for Lutwyche.
- create the framework for a master planned TOD style Lutwyche Town Centre.
- explore all redevelopment options over 572-614 and 561 Lutwyche Road and other affected land holdings to demonstrate the restrictions and potential of integration and provide a better urban regeneration outcome for Lutwyche.
- consider a solution to allow existing land owners with options to buy back residual land and work with the State Government to incorporate basic design and structural elements within or under the busway infrastructure.
- Review the project outcomes and consider the Lutwyche Corridor Neighbourhood Planning outcomes to ensure that the eventual land use outcomes can deliver the built form needed and wanted for Lutwyche as proposed under the CDIMP.
- Review the design for unforeseen outcomes upon land as a result of the Changed Project.

The Northern Busway gives little regard to the potential of 572-614 Lutwyche Road in the urban regeneration of Lutwyche. Consideration of this property is a requirement for Airport Link and the Northern Busway. Projects provide opportunity to reinvigorate Lutwyche and recreate contemporary version of a vibrant and diverse community. The Northern Busway ignores or severely limits future development opportunity and could compromise Lutwyche as a centre.

The orientation of the proposal within these bus stop locations and structures, severely limits the view corridor and exposure to the site whilst travelling north along Lutwyche Road. This exposure would be seen as fundamental in providing and/or maintaining the retail potential for

572-614 Lutwyche Road together with other property to the north and adjoining Lamington Avenue.
The network of paths and underpass foot bridges are convoluted and limit the accessibility of the site to the north as a destination. The escalators are not proposed as part of stage one which further limits the accessibility for this purpose and could have been considered for integration with future development opportunities.
The proposed Brisconnections underpass has large areas of space with limited vision from the streets and no provision of adjacent uses to provide a sense of surveillance and safety around these spaces. This could produce an unsafe place.
The placement of the bus lanes to the western side of Lutwyche Road severely limits the development potential of the northern end of 572-614 Lutwyche Road and other adjoining sites. Under the proposal it has been effectively disconnected from the road network that could provide access for adequate basement parking.
The proposed open public space on Lamington Street and particularly to the western side of Lutwyche Road significantly reduces any future development opportunity of these sites. It is also considered that the proposed underpass configuration limits the ability for this scheme to provide a safe and connected public environment in creating Lutwyche as a village. An approach that integrates retail and residential and transport uses could connect vibrant and safe public open spaces with the existing significant public space in Bradshaw Street.
The balance site along Lutwyche Road under the BrisConnections scheme has been reduced to approximately 17m in width which will make any ramping and parking space inefficient, ineffective and virtually impossible to develop to the current approved density post completion of the proposed bus station scheme in 2012.
The RcF Report places the Northern Busway (Windsor - Kedron) under the same umbrella as Airport Link (i.e. administered by CNI), and proposes significant departures from the existing planning documents to provide 'quick fix' design solutions.
Acknowledged that new transport infrastructure has the potential to reinvigorate the Lutwyche suburb, but this must be balanced with things that affect the future development of the suburb for community use.
The Changed Project Documents dispense of the need for the State Government to work with the Lutwyche community and make material variations to existing alignments to allow for greater takes of land. These realignments significantly impact on balance land in the centre of Lutwyche, that it will be almost impossible to use this balance land for future community development.
The changed project severely limits the opportunity to develop Lutwyche as a multi-use centre: <ul style="list-style-type: none"> • The Lutwyche bus station location was nominated as a site for multi-use

<p>development. The RcF report now nominates this for excavation and extraction of boring machines. This prevents redevelopment by excluding potential for basement design. The report also misleads by way of suggestion and exclusion of fact, that an offset of development from one side of Lutwyche Road to another would provide sufficient and available development opportunity.</p> <ul style="list-style-type: none"> • Network of paths and underpass footbridges are convoluted and limit accessibility of the site to the north as a destination. • The underpass area has large areas with limited vision from the street and adjacent uses to provide a sense of surveillance. This could produce an unsafe place. • The placement of bus lanes severely limits the development potential of the northern site as it has been disconnected from the road network that could provide access for adequate basement parking. The site has also been reduced to 17m in width which would make any ramping and parking space inefficient. • The large pedestrian plaza is a waste of land with no regard for existing designations within the City Plan, or any new designations approved under the Local Area Plan. The design is inconsistent with best practice design for the Lutwyche corridor as it sterilises significant sites which could be used more efficiently. • Adopting a system of underground ramps and less intrusive portals in lieu of surface road connections will sterilise future use of all land above those tunnels, wasting more balanced land.
<p>A six week consultation period is far too short for changes that involve material variations to existing alignments, materially impact on balance land requirements for future community development of the Lutwyche corridor, and make significant departures from existing project documents in order to provide quick fix solutions to the State Government and its investors. More public scrutiny is needed.</p>
<p>Northern Busway and Airport Link are Public Private Partnerships. CNI was originally established to administer Airport Link only. The Changed Project Reports now make the Coordinator General and CNI responsible for the delivery of the Northern Busway in the Lutwyche Corridor.</p>
<p>Believe the State Government's judgement has become skewed since CNI became involved and it is more reluctant to engage in activities that are necessary for balancing competing public interests (e.g. effective community involvement in the design phase as currently recognised under CDIMP before these variations). The State Government appears to be bowing down to commercial pressure from its investors and public pressure it has essentially brought upon itself by putting the cart before the horse. Has resulted in a revised design which, now gets it completely wrong for Lutwyche.</p>
<p>The proposed variations in the Changed Project Documents remove those impediments in the CDIMP which make it necessary to work with the community to preserve the balance land and key sites.</p>

Submission No. 36
Summary of Issue/s
Concerns in relation to potential impacts on the off-leash dog area adjacent to Kedron Brook.
No signs have been posted at the off-leash dog area to notify the users of planned changes. Not notifying users in reasonable time has taken away their democratic right to object. However, it has not taken away the right to do so at any other time.
Users of this area have been encouraged to own dogs having this facility available. It is one of the best areas in a diminishing green space in Brisbane. These areas are very important to people of Brisbane, and are used by large numbers of people night and day.
The change of bikeway route can be on the high side away from the creek so that dogs can be walked freely without interfering with the cyclists and pedestrians. A fence would need to divide the area for safety.
There is another area on both sides of the creek further north that are also suitable for off-leash dog areas to regain some of the space taken by the bikeway.

Submission No. 38, 39, 40, 41
Summary of Issue/s
Concerned that the construction and operation of the Airport Link will negatively impact on me and reduce my ability to enjoy the peace and amenity of my home. Measures are required to mitigate these factors and ensure residents' health, well-being and quality of life are not compromised.
Construction of a 12 m elevated structure on Gympie Road will negatively impact visually on the outlook of my home as well as generating increased noise and air pollution. This should include 3 m high perspex noise walls to minimise noise impacts.
Relocation of the eastern boundary of Gympie Road between Stafford Road and Park Terrace will result in four lanes of traffic travelling on land currently occupied by residential and commercial properties, generating increased noise and air pollution. Three metre high earth or perspex noise walls should be constructed on northern and eastern boundaries of properties to reduce noise impacts.
Current plans do not include provision for noise walls to reduce the impact on residents.
Currently, no air quality monitoring is proposed for surface level traffic in the vicinity of the Kedron residential area adjacent to the transition structures, or from the ventilation outlets. This is not acceptable and needs to be addressed. Possible congestion will occur in peak

hours as vehicles exit and enter Airport Link, potentially resulting in air pollution on surface roads as well as from the ventilation outlet. Noted that filtering of ventilation outlets is being trialled in Sydney and consideration should be given to trialling this for Airport Link.
It is unclear what actions will be taken to protect residents from undue noise during night works and construction over extended periods, so that they can sleep properly
Current plans do not address the need for pedestrian access to and from the Kedron Park Medical Centre for residents living east of Gympie Road. Pedestrian access must be provided to maintain current ease of access to the Kedron Park Medical Centre as well as inbound and outbound bus services.
Proposed pedestrian access for residents to and from the eastern side of Gympie Road to the Kedron Busway Station is both unsafe and impractical. Local residents who access the inbound 333 bus stop by walking down Glen Kedron Lane to Park Terrace must be given equally user-friendly access to what is currently provided.
Spoil removal impacts have been addressed through contractors being required to use covered trucks, new and well-maintained vehicles, GPS tracking to monitor vehicle movements and times, as well as education about driver behaviour.
A toll-free 24/7 telephone number should be provided to local residents to respond to all concerns about construction impacts with response time standards to be 2 hours for noise and air complaints, and 24 hours for other issues.
Air and noise quality monitoring should be carried out during the construction period and if noise goals are exceeded between 6.30pm and 6.00am, construction should cease immediately. Local residents should be provided with ongoing reporting of this monitoring.
Regular consultation should take place with local residents about construction to provide detailed information about activities at each stage of the project, including timelines and likely impacts.
An offer to relocate residents' free-of-charge should be made, if at any stage noise or air quality goals have or are likely to be exceeded.
All contractors must be required to demonstrate compliance with noise and air quality goals and local residents should be kept informed about this.

Submission No. 43
Summary of Issue/s
Satisfied that an attempt has been made to lessen the impacts of Airport Link, and that positive step to provide residents with an outcome acceptable by most people. However,

further revisions should be undertaken.
The proposed 'land bridge' is unsightly because it looks unfinished and hangs mid-air, a magnet for youth to congregate, and a convenient place to throw rubbish into the park and tunnel.
The tunnel should be extended to go underneath Kalinga Park near Sandgate Road to avoid destroying mature trees and habitat. These trees are old and established and are needed to absorb tunnel and carbon emissions. The ventilation outlet should be moved further away to the industrial areas on the East-West Arterial.
The EIS has viewed the flora and fauna as "not endangered", "common", etc. Does this mean that we can bull-doze what we have and start again with token shrubs?
Kalinga/Ross Park also includes excellent roosting and nesting sites. Gradual clearing of habitat should be taken so that animals have time to move on, and nocturnal animals should be moved over a period of weeks not just the night before clearing commences.
Kalinga Park should remain as it is. "Doing nothing" can still be viewed as positive without having to make up for destroying another part.
No provision has been made for an area which cannot be disturbed by humans. The retention of the trees next to Sandgate Road would have made a statement to people arriving at the airport.

Submission No. 44
Summary of Issue/s
The proposal on display may be incorrect, property owners and public misled by CNI not making full and accurate disclosure of land required for project
Advised by Dept of Main Roads in April 2008 that five lots at Brookfield Road would no longer be required by DMR/ CNI. Further advised by DMR that portion of seven lots between the new road alignment of Stafford Road and rear boundaries of the seven lots would be sold back conditional upon land being amalgamated with five lots at Brookfield Road and vehicular traffic coming off Brookfield Road. Advised in May 2008 that five lots would be required by CNI. Sought to clarify conflicting advice at visitor centre and told by CNI staff there were no further requirements on the land.
Object to location of the Control Centre. The Control Centre is located in wrong zoning and should be relocated to an MP2 MP3, MP4 or light industrial precinct. Homes fronting Brookfield Road should not have residential amenity destroyed by office building and maintenance that operates 24/7. CNI does not have right to disobey the town plan which exists to safeguard amenity of residential areas. Control Centre should be located in business

location. Current proposal ignores City Plan 2000 and will destroy the lives of property owners who live in Brookfield Road.

Location of the proposed entrance to Control Centre will require traffic coming from CBD /Airport to use Brookfield Road to access the Centre (argument previously used by BCC to refuse application for commercial building). Traffic should not be required to use quiet residential street to access commercial building. Furthermore, vehicular entrance/exit is to close to corner of Stafford Road to be safe. Traffic from Everton Park could bank back into Stafford Rd, resulting in injuries and fatalities.

Submission No. 45

Summary of Issue/s

Concerns with work carried out on exit/entrance of Airport Link Project at Toombul end of the project, include:

- dust particles generated while the spoil is taken excavation area and when earth embankment being filled in the Toombul Shopping Centre car park
- construction noise
- increase in traffic passing house, and impact on quality of life
- fallout of exhaust particulars
- devaluation of land value due to proximity to ventilation stack
- vibration of ground due to earthworks or excavation shifts house off its stumps or damages house stumps.

Suggest the following remedies to mitigate impacts:

- double glazed windows to alleviate noise during construction phase and operation
- clear, see through sound barriers along southern side of East West Arterial to replace current ineffective wooden sound barriers. This would allow sunlight into backyard
- house washed monthly during construction to remove dust and roof cleaned at end of construction phase
- filtration system installed on ventilation stack minimise impact of exhaust particles on surrounding residential area and environment
- financial compensation for devaluation of my land by having ventilation stack within 300m
- restumping of house if vibrations from earthworks or excavation works during construction shifts house off its stumps or damages house stumps.

Submission No. 46

Summary of Issue/s

This submission was provided in confidence.

Submission No. 48
Summary of Issue/s
Concerned about construction impacts (i.e. noise, dust, security and social change) and operation impacts (i.e. noise, air quality and visual amenity).
RfC Report needs to consider appropriate control methods to minimise noise generation during the construction phase. Concerned that the report does not effectively cover this issue.
While dust is considered in the RfC Report, if recent weather conditions prevail, dust will become a major issue for residents near to construction works. Proactive dust management needs further investigation in the RfC Report.
Recent acquisition of local properties for the Project (as well as for NSBT) and increased number of vacant properties is having a negative effect on residents (i.e. regular social events were common with Federation Street property owners). Social make up of the street has changed significantly with number of properties now vacant, and feeling of declining community security and neighbourhood watch. This issue is not adequately addressed in the RfC Report.
Access to Mann Park and Enoggera Creek during construction and operation is important and needs to be considered (i.e. for kayaking, football, etc).
Concerned that traffic and local operation noise levels will increase significantly once operation of the project begins in 2012. Use of appropriate sound mitigation measures are critical.
Large ventilation stack situated close to Byrne Street. Air quality is an important consideration and believe that the stack location would be better suited away from a residential area such as Federation Street to ensure air quality impacts are reduced for nearby residents.
Loss of visual amenity will impact on residence with the construction of many aerial structures as part of the Changed Project. Concerned that we will be significantly impacted by the project with the loss of our highly regarded front view towards the city.

Submission No. 51
Summary of Issue/s
Petition relating to the relocation of the bike path on Kedron Brook, transferring the path from the eastern side of the Brook will cut the dog off-leash area by about half.
Concerned with Kedron Brook bikeway and dog off-leash area. The democratic process appears to have been voided by a State Government agency, appearing to be ignored by

BCC, and is causing due concern to the residents of Brisbane who use a great public facility.
Seems to be no provision for the fact that a combination of a dog off-leash and cyclists is lethal.
The area is great to socialise dogs and has also created friendships among owners who look forward to these interactions.

Submission No. 52
Summary of Issue/s
Opposed to non-sustainable and continued road building and multi-housing constructions that ruins the ambience of Brisbane. Far more appropriate to spend money on educating people to not rely on personal vehicles. Better quality and more frequent public transport, combined with bicycle and walking paths away from the fumes of traffic, would be a far better option.
The project is contributing to unnecessary high stress levels for the people like ourselves who are directly impacted. Now live in suspense, waiting to see what impact there will be, how much noise from construction and after, how safe our homes will be during and after construction, how well legalities and compensation issues will be handled. Hope that lifestyles are able to continue in a manner we desire. If wished to sell property, probably couldn't given the three hanging over affected properties.

Queensland Government Agency Submissions

Submission No. 1
Summary of Issue/s
No impact for TAFE Institutes as a result of the changed project.

Submission No. 3
Summary of Issue/s
Cumulative impacts of the proposed changes will have an adverse affect in some areas, particularly in areas that incorporate worksite changes (i.e. Chalk Street, Truro Street and Kalinga Park).
Traffic in Truro Street will increase due to removal of spoil. Truro Street will be further affected by noise, dust and intrusive night lighting during night-time operations. Worksite will have potential to change pedestrian access.
Chalk Street residents will be affected by drilling and blasting during construction and will suffer diminished amenity due to noise, dust and intrusive night lighting during night-time operations. Pedestrian access could be restricted.
The worksite at Kalinga Park will restrict park usage. Residents will also suffer changes in amenity due to TBM activities.
Proponent should mitigate and manage potential adverse impacts caused by proposed worksite changes to minimise diminished amenity of local residents.
The project does not impact directly on any departmental properties

Submission No. 7
Summary of Issue/s
Concerns about student welfare in accessing the schools during construction (i.e. set down areas, access paths and lines of visibility).
Night lighting of construction areas near schools, particularly in winter
Affects of increased noise levels

Air quality particularly 'ultrafine particulate matter' and possibility of electrostatic scrubbing of exhaust emissions from ventilation stacks
Proximity of ventilation outlets to schools (i.e. should not be within 300m of school)
Impost on existing air conditioners by dust from construction areas.
Impact of potential redevelopment of the Department of Emergency Services Complex on the operations of the KSHS.
Potential impact on the oval space of Kedron SHS during construction
Evacuation procedures for schools should a major accident/fire occur in the tunnel
Assurance from Brisbane City Council that the 'student set down area' near Woolloowin State School will be approved
Volumetric compensation for tunnels beneath Woolloowin SS and Kedron SHS
Vibration level in tunnel beneath KSHS, particularly at the entrance portal near a school building.
Impact of idling vehicles near connections to major roads (i.e. Gympie, Lutwyche, Rode, Sandgate and Stafford roads)
Removal of spoil with respect to truck movements or conveyor activity
Impact of gridlock traffic situations resulting from vehicle collision on any arterial associated with the redirecting of traffic

Submission No. 8
Summary of Issue/s
Proposed changes provide a number of improvements which the DTRDI support, including reduced project footprint in the Bowen Hills area, reduced traffic congestion due to the inclusion of the proposed conveyor for spoil haulage, maintenance of access to businesses on O'Connell Terrace, reduction in visual impact.

Submission No. 9
Summary of Issue/s
No issues raised.

Submission No. 12
Summary of Issue/s
[RfC] Report does not demonstrate whether the section of Campbell Street (from Mayne Road/Hamilton Place to Abbotsford Road) has sufficient capacity to accommodate anticipated future traffic volumes. Would like to ascertain whether any additional road widening or streetscape works are proposed along this section of Campbell Street.
Concern around the likely length of traffic queuing at Mayne Road/Hamilton Place junction during peak periods. Airport Link likely to generate additional traffic along Campbell Street. Concerned that this will result in queuing along Mayne Road and Hamilton Place at the Campbell Street intersection. This would detract from the amenity of businesses, residents and other users and lead to traffic delays and safety issues for pedestrians and motorists. Request additional information on proposed signal cycle and phasing times for the junction to assess likely impact on traffic flows within the Bowen Hills TOD.
[RfC] report does not demonstrate how Airport Link will connect into the existing road network in terms of turning and traffic circulation. Seek clarification on proposed road layout and traffic circulation for Campbell Street on and off ramps and provision of access under the ramps via Tufton Street. Tufton Street provides an important link from QLD newspaper site to Bowen Bridge Road via O'Connell Terrace and it is important that this movement be maintained.
[RfC] Report provides insufficient information on the design of the Campbell Street on and off ramps. Additional information is required on the heights of the Campbell Street on and off ramps and location of columns and supports to enable an assessment of the visual impact on Tufton Street and surrounding area as well as impact on property.
[RfC] report gives inadequate attention is given to CPTED principles in association with the pedestrian and cycle network. Concern that there remain a number of CPTED issues associated with the proposed pedestrian and cycle network. The main pedestrian/cycle link passes through very isolated area near Enoggera Creek at Horace Street through to Federation Street. Offers not informal surveillance to promote user safety. Paths passing beneath the series of overpasses would offer reduced amenity, exacerbating users' perceptions of poor safety, and affecting use of facility. Suggest that the pedestrian/cycle link across Enoggera Creek to the urban area across from the RBH should promote pedestrian access along Bowen Bridge Rd as the dominant after-hours route. Direct pedestrian/cycle connection should be provided to the bus station at Northey Street. Suggested that a safety audit be conducted along the pedestrian/cycle route with application of CPTED principles.
Proposed open space areas are inaccessible and will suffer from underutilisation and safety issues. Potential attraction of these areas to the homeless population needs to be planned for in terms of facility provision. The proposed hilltop park would not be easily accessible to people within the Bowen Hills UDA and is unlikely to serve this population. Railway line and

the elevated road infrastructure create an impermeable barrier to safe and convenient access to this open space. Isolated open space along Enoggera Creek at Horace Street is highly likely to attract homeless people. Appropriate locally available facilities (e.g. crisis accommodation, safe place, meals, showering and storage) and services (e.g. legal counselling, financial and health) will be required to support the needs of homeless people in this location. Safety in rough sleeping will need to be assured.

Submission No. 17
Summary of Issue/s
Overall visual and landscaping/ urban design amenity value is significantly improved by the Changed Project and improvements to pedestrian connectivity between open spaces, public transport notes and urban centres are noted.
Concerns over spoil haulage through the Airport Roundabout, the ability to maintain existing traffic capacity during construction, and portal connections with State-controlled roads not being adequate, with possible cost transfer to Main Roads in the future.
Conveyor system for spoil haulage is supported, subject to appropriate approvals
The spoil haulage route through the Airport Roundabout will be subject to further CTMP analysis and Main Roads approval. Until the Airport Northern Access Road is complete, restrictions are requested from Monday to Friday (5am - 8pm), Saturday (5am - 4pm), and Sunday (11am - 4pm). Only exception is left turn movement into Airport Drive from the Gateway north approach where there is some capacity during peak periods. Alternative haulage route is noted.
Maintaining existing traffic capacity during construction particularly around Gympie Road with a tidal flow arrangement has not been demonstrated. Concerned that operational characteristics (safety and capacity) may not be achievable within the existing constrained corridor.
Concern over portal connections with the State-controlled roads not being adequate in terms of geometry that need to be addressed to prevent possible cost transfer to Main Roads to rectify in the near future (i.e. Gympie Road northbound through Kedron). This arrangement will cause congestion upstream in peak periods.
Capacity of intersections at Gympie/ Stafford Roads, Lutwyche/ Kedron Roads and Sandgate/ East West Arterial Roads to provide network and Airport Link operations, as well as capacity for diversion and segment incident impacts and closures has not been demonstrated. Infrastructure layouts do not ensure operational performance and suggest reduced capacity at some locations.
Change in design for connections to Stafford Road will lead to more extensive works with

potential environmental and traffic impacts.
It is important to consider the one off events at night (i.e. one truck every 15 minutes). Potential for truck haulage construction noise to have a significant impact at night. Care should be taken when using terms such as "undetectable" and "insignificant".
Important to consider the noise impacts of trucks hauling spoil as opposed to general vehicles. Main Roads question whether the road traffic noise from an increase in spoil truck trips at night on the East West Arterial would be minimal and still unlikely to be detectable has been confirmed by noise modelling or an assessment based on previous noise modelling for the reference project. The report does not consider road gradients along the haul routes with particular consideration given to sensitive areas (i.e. schools, parks, health facilities, nursing homes, etc).
Issues related to the EPBC Act should be referred to in regard to the conveyor sections of the [RfC] Report.
[RfC] Report does not provide information on the hours of operation of the conveyor system and what magnitude and nature of the noise will be nor what kind of noise modelling was used to assess the conveyor system.
Shortened conveyor option will require access via the East West Arterial. The report does not disclose what the impacts will be as a result of construction and maintenance of the conveyor system.
Report should include maps showing cycle network and resultant changes.
The report contains insufficient detail about potential traffic impacts on intersections and pavements on the State Controlled Road network including Gympie/ Rode roads, Sandgate/ Rode roads, Sandgate/ East West Arterial roads and Sandgate/ Toombul roads.
Proposed traffic and parking arrangements for the new Gympie and Stafford Road worksite appear suitable. Proposed access to Toombul site from East-West via Widdop Street is satisfactory.
Change to the Project should offer improvements to the operation of the whole network, including Airport Link itself, cyclists and public transport users without adversely affecting local amenity, connectivity and operation of regional roads. These criteria appear to have been met.
Access plan should be provided so that works who have no requirement to transport special equipment by private vehicles will access the site by public transport. Supplementary services may be required to connect to the existing public transport network.
Predicted vibration and regenerated noise levels within some sensitive areas (i.e. hospital and residential areas) exceed the Coordinator General's conditions appreciably, particularly during night time tunnelling operations. Not clear how the mitigation measures included in the Noise

<p>and Vibration EMP will achieve noise reductions of up to 19 dB. [RfC] Report does not discuss the incidence of isolated noisy events (i.e. engine brake noise) inside noise sensitive premises and how it is going to be managed with respect to impact of sleep disturbance on the community.</p>
<p>Operational noise criteria should not include the 'status quo'. For state-controlled roads, investigation, assessment and noise barrier design should be undertaken in accordance with the '<i>Road traffic noise management code of practice 2008</i>'. A noise attenuation strategy should be put in place to achieve the 63/68 dB(A) L10 (18h) criterion levels, not just the 'status quo'. Where compliance with these criteria is not cost-effective, technically feasible, or does not suit the streetscape/ built environment, consideration should be given to going outside the road corridor (i.e. in-house treatments/architectural treatments).</p>
<p>Recommendations and conclusions should include a section on post-construction monitoring of operational noise (i.e. within 12 months and 2022). Report does not identify the impact on the Consortium if the criteria are not achieved.</p>
<p>Recommendations and conclusions for construction noise and vibration should include a complaints management strategy.</p>
<p>The maximum predicted concentrations of air pollutants in the vicinity of the Clayfield stack are considered acceptable because of the advantages in terms of reduced visual impact.</p>
<p>The greenhouse gas report does not provide detail on how energy consumption figures were obtained for the reference project or how the changed project could differ. Appears the changed project offers benefits in terms of road network operational greenhouse emissions compared to the reference project. Operational greenhouse gas emissions are significantly higher than construction emissions and significantly higher for the changed project, compared to the reference project. No reason for these differences is given. The report does not quantify the likely quantum of the offset due to reduced congestion. It is recommended that the report take this into account.</p>
<p>The urban design themes, etc, should be design developed to provide a greater degree of design integration and consistency with the UD treatments of NSBT to better mitigate the visual impacts of each project and integrate both project works into the dominant urban fabric. Current suite of finishes does not show design integration with NSBT. Proposed elements should not be identical, but should achieve a degree of similarity, integration and design referencing.</p>
<p>Safety risk of high density urban forests - design offset from road and species selection need to be measured against risk to public road and pedestrian traffic safety. Tree planting may not be feasible and will have an impact upon change design. Lower planting may have to be substituted in lieu, having significant aesthetic impacts on change design.</p>
<p>In order to achieve a level of structure design integration with the adjoining NSBT tunnels, some form of canopy element consistent with the NSBT approach would be a preferred</p>

outcome.
Overall visual complexity of the Bowen Hills interchange is increased. Appropriate urban design treatments and structural design should be investigated to 'lighten' structural depth and minimise negative visual impact. Noise barriers to structures are not currently addressed. Consistency of urban design approach required with NSBT.
Concern over the use of silver Alucabond panelling for the Windsor ventilation outlet as an alternative to the originally proposed mix of architectural materials. The high reflectivity of the panelling may create a glare hazard for motorists and negatively impact amenity. This should be investigated and resolved during design development.
Green acrylic noise panels shows limited relation to VSO design. Confirmation required that acrylic noise panels will be accepted by Main Roads. Acrylic panels do not conform with Main Roads noise wall requirements. Concerns over the durability and maintainability of such materials. Confirmation is needed that sufficient screen planting width is available to mitigate visual impacts of the noise wall.
Unclear how the 'green gateway' portal element would be achieved as a constructed element. Concerns that such treatment is not feasible in terms of design, maintenance and plant viability. Would appear costly lane closures would be necessary for maintenance. Issues such as water wise use and maintenance minimisation and access will need to be resolved in detail design to demonstrate suitability of proposed treatment. Recommend other appropriate hard scaped treatments be developed.
Changed project does not depict the same level, extent and intensity of boulevard treatment north and south of Sandgate Road over East-West Arterial as the EIS, seemingly with major impacts to streetscape amenity between Grace Street and Noble Street. Median planting to the north of the Sandgate Road/ East West Arterial intersection is lost in the Change Project. Median planting preferred from landscape amenity value perspective.

Submission No. 22
Summary of Issue/s
DPI&F has issued approvals for marine plant disturbances at Enoggera Creek and for construction of a waterway barrier on a Kedron Brook tributary.
The proposed relocation of bridgeworks and other changes that alter the footprint dimensions or infrastructure location, including waterway barriers, should be discussed with DPI&F at the earliest opportunity as existing approvals have limited flexibility and new IPA applications may need to be submitted.

Submission No. 23
Summary of Issue/s
RB&WH have no comment to make on the Changed Project based on assurances contained in the RfC Report on emergency vehicle access, property impacts and changes in local traffic flows.

Submission No. 25
Summary of Issue/s
Number of matters of relevance to NRW included handling and management of acid sulphate soils, implications of conveyor system for Aboriginal Cultural Heritage, tenure arrangements during and after construction, potential impacts on Kedron Brook and other 'watercourses' and any potential flooding, requirements under the Vegetation Management Act.
Updated Coordinator General's Evaluation Report needs to identify the DNRW's jurisdiction under the construction phase over groundwater and surface water and matters of tenure and Aboriginal Cultural Heritage.
All proposed spoil excavation, including the additional amount identified within the Changed Project, that meets the triggers under State Planning Policy 2/02 must be investigated in accordance with SPP2/02 and its associated documents. The EMP sub-plan should detail the ASS or potential ASS risk level and management solutions for all relevant spoil associated with the Project.
The relevant Aboriginal Cultural Heritage Management Plan must be updated to include the proposed conveyor route. This should include a search within the Aboriginal Cultural Heritage Database and the Aboriginal Cultural Heritage Register.
With regard to the Change Project, NRW emphasises that the intent of the project should not only be to construct a system of road tunnels, busways and bridges but also to provide tenures that are most appropriate for the efficient administration of this infrastructure. Where land acquired for construction purposes is intended to be dealt with as surplus, the intent of the project should also be to ensure the allocation of an appropriate tenure for the surplus land. That allocation should be made in consultation with NRW.
Tenure over a watercourse will not be created under the Land Act where the construction and maintenance of transport infrastructure may be authorised under another Act. With regard to the constructed bridge, the State may safeguard the protection of the affected waterway.
Kedron Brook is classified as a 'watercourse' under the Water Act 2000. The proposed temporary redirection of Kedron Brook as presented does not constitute a diversion under the

Water Act and therefore does not trigger the need for a development permit under the IPA.
Proposed redirection of Kedron Brook triggers 'riverine protection' provisions under the IPA. If, however, works are undertaken by an 'entity' or on behalf of an 'entity', the process does not require a Riverine Protection Permit but is subject to self-assessable conditions. A plan of activities is required to be submitted to NRW prior to commencement of construction.
If works are not conducted by an 'entity', approvals required by NRW include: <ul style="list-style-type: none"> • Riverine protection permit or IPA permit • Placement and fill, excavation • Works within a watercourse • Diverting the course of flow
A creek/drainage line has been identified that crosses the project alignment at Toombul and is connected to Kedron Brook. NRW recommends a request be lodged to determine the status of this water feature in terms of the Water Act. If it is determined to be a watercourse (and construction cannot be contained in the beds and banks) the approval process could take several months and would require public notification and resource entitlement being given by NRW under the Water Act.
If at a later stage fresh water is proposed to be taken from watercourses or ground water sources for construction purposes, the NRW should be contacted regarding relevant permits.
NRW is satisfied that the flooding mitigation aspects of SPP 1/03 have been appropriately covered.
The project area is not mapped with remnant vegetation. Aerial photographs have identified that the area may require clearing of native vegetation on State land. All native vegetation on State land, remnant or not remnant, may require a clearing permit unless the clearing is except pursuant to Schedule 8. Brisbane City Council Planning Scheme should be consulted to ensure vegetation clearing does not contravene local tree clearing laws.

Submission No. 30
Summary of Issue/s
In general, the management and mitigation strategies highlighted in the RfC Report and existing Coordinator General's conditions will address Queensland Health's interests.
Acknowledge that many benefits achieved through use of conveyor system to transport spoil. However, this may result in ambient noise levels along the conveyor path increasing unless noise emissions are minimised through the implementation of appropriate operational and maintenance procedures.
Public safety will need to be considered in the design and operation of the conveyor to

prevent public access, and people, particularly children.

Submission No. 31

Summary of Issue/s

Changed Project incorporates a number of positive aspects such as improved urban design features, revised connections to road network, and maintained integration with the Northern Busway (Windsor to Kedron).

In some areas of the RfC Report, information presented was insufficient to form a complete assessment of the Changed Project and its impacts. Further detailed design may resolve such issues.

Ensure integration with the Northern Busway (Windsor to Kedron) is maintained and need for a management plan for the removal of bus stops. Ideally the TMP would ensure construction was staged in a way that not all bus stops were closed at once (i.e. inbound on Lutwyche Road) as an appropriate level of access to bus stops in this area needs to be maintained.

Extent of permanent and construction impacts on rail is currently unclear and will need to be detailed. Significant infrastructure and services of the North Coast Line and Airtrain (passenger and freight) will need to be maintained. RfC Report makes no significant mention of the impact upon rail infrastructure or services along the North Coast Line and the Airtrain. Unable to be satisfied that impacts will be acceptable based on the limited extent of information contained in the report.

Construction and operation of a spoil conveyor in the Airtrain corridor needs to be explored in more detail to ensure effective operations (i.e. details regarding the construction, management and lease arrangements of the conveyor need to be provided). Concern regarding impacts on Airtrain's land and proposed compensation for land, and patronage impacts. Mitigation strategies for impacts on Airtrain's services should be provided.

Changed Project generally provides significantly improved functionality although southbound connection from Airport Link to Lutwyche Road at Kedron Park is omitted when compared to the reference project. Substituted by a more indirect route involving west bound tunnel traffic entering Stafford Road then proceeding to Lutwyche Road via Richmond Street and Bradshaw Street.

QT supports spoil conveyor to reduce the impact of spoil haulage.

It should be noted that PIFU (2007) and NIEIR (2008) did not use the 2006 Census data, but was based on the 2001 Census supplemented with other post-2001 sources. The 2016 and 2026 population figures reported in the RfC Report match what QT has derived from OUM supplied data, but 2016 and 2026 employment figures less (i.e. 2016 figures in the order of 35,000-45,000 less than what QT derives, and 2026 figures in order of 55,000 and 120,000

<p>less). Difference may be due to use of older NIEIR data. Anomaly should be brought to attention of and verified by DIP as authority on PIFU and NIEIR data. A potential implication of incorrect data may be that the benefits of the Airport Link are understated. However, demographic assumptions the same for Reference Project and Changed Project models so should not significantly change conclusions drawn comparing the two projects.</p>
<p>Appropriate to include the Hale Street Link, Gateway Upgrade Project, Northern Link and Northern Busway in traffic models for Reference Project and Change Project.</p>
<p>Not clear why the percentage of HCVs increase after increasing the toll for these vehicle types.</p>
<p>Total Airport Link changes in traffic totals (Table 3-2 for 2012) are inconsistent with the sum of the changes in tunnel section volumes.</p>
<p>Some results in Table 3-4 appear to be counter intuitive (i.e. 2026 ICB has less traffic with Airport Link than without Airport Link when in 2012 it has more).</p>
<p>QT notes there will be cumulative effect of Airport Link and range of other key projects (i.e. GUP, Airport Roundabout Upgrade, NSBT). Collectively they could have more significant impact from environmental impact and traffic volume perspective.</p>
<p>Southern access points at Bowen Hills encroach on cycle infrastructure. Detour routes must be provided of equivalent or high quality than existing routes.</p>
<p>Any interruptions to the cycle way along Kedron Brook and at Clayfield/ Toombul must ensure that detours are in place of an equal or better quality than existing.</p>
<p>Any road works in and around the road intersections at Kedron/ Lutwyche must have consideration for cyclists and pedestrians safety and utilisation of the area.</p>
<p>TravelSmart workplace project currently underway at DES Kedron until March 2009. Airport Link project should not close walkways and cycleways without providing efficient alternatives.</p>
<p>On-road cyclists should be able to cycle in the kerbside lane on surface roads without the danger of being passed with insufficient clearance. Lane width should be 4.5m to kerb face especially if large vehicles also use the lane.</p>
<p>Transit lanes (4.5m wide) should be provided on all trunk routes (i.e. Lutwyche Road).</p>
<p>Layback kerbs would assist cyclists should their lane be reduced in width. Opportunity to cross the kerb and exit the road lane would increase the safety of cyclists.</p>
<p>The alignment of Airport Link and the interchanges makes safe cycling through these areas difficult. Parallel routes need to be developed to present a desirable alternate to the central 'main road' corridor.</p>

Submission No. 37
Summary of Issue/s
Number of perceived improvements to the Project that Council support including removal of O'Connell Terrace ramps and enhanced connectivity between O'Connell Terrace and RBH, partial or full burying of ventilation outlets, dedicated pedestrian and cycle bridge over Kedron Brook and improvements to Kedron Brook corridor, increased landscaping of portals west of Sandgate Road, change arrangements at Kedron Park/ Stafford Road connection that reduce overall visual impact of the Project.
Important to ensure the detailed design of the project delivers such enhanced outcomes and Council should be consulted early in the design process to ensure outcomes are maximised and consistent with Council policy and standards.
Rode Road is unlikely to withstand the loads imposed by the proposed spoil cartage operation and the 'Northern Haul Route' should not be adopted unless strengthening of this pavement is undertaken before spoil haulage operations commence.
Council remain concerned about the proposed southern haulage route and possible impact on inner city residential area. Such impacts should be considered and mitigated in the development of the Spoil Haulage Management Plan.
Use of local streets for delivery of large plant would require an application for Travel of an Excess Mass and Excess Dimension, Special Purpose Vehicle on Brisbane City Council Controlled Roads to be lodged prior to use of the road so that impact of the loads could be assessed.
Cumulative affect of decisions made in respect of the Northern Busway and Airport Link have significant implications for the draft Lutwyche Road Corridor Neighbourhood Plan, particularly decision not to pursue ultimate Busway solution before 2020 between Federation Street, Windsor and Stoneleigh Street, Lutwyche means redevelopment of Windsor East and Albion Road Precincts should be postponed. Decision to proceed with Kedron Park Busway station on the western side of Lutwyche Road promotes pursuance of complementary land use intensification around this station.
Council concerned as to extent the new tunnel portal surfacing in the centre of Lutwyche Road will further sever and limit east-west connectivity between Northey and Federation streets. Council considers that an appropriate mitigation response is required to address this impact.
Council will be required to undertake further targeted consultation in relation to the draft Neighbourhood Plan due to Airport Link and Northern Busway and make consequential changes to the draft Plan. Suggested that this should be noted in the consideration of the RfC Report.
Due to temporal nature, proposed work sites do not present a challenge to the long term

achievement of urban development outcomes of the draft Neighbourhood Plan.
Council should be consulted as part of detailed design process for restitution of Council parks and open space impacted by construction sites and development of new parks. All parks returned to Council should be designed to Council design standards including Park Planning and Design Code
Noted that the area identified at the Gympie Road north of Stafford Road precinct does not meet Councils location requirements for parks and is not supported. However, this area does provide opportunity for landscaped buffer.
RfC Report (p61) describing design ventilation outlet at Southern Connection refers to "architectural treatments" to mitigate visual impact of structure. Greater detail is sought on these treatments. All ventilation outlets present significant public art opportunities.
Council has completed the 'Lutwyche Road Corridor Public Art Masterplan'. The design of urban design treatments for the corridor should respond to the masterplan.
Appropriate mitigation measures should be implemented, through detailed community consultation, for local residents impacted by the new fire water compound and removal of proposed pocket park on land to north of Wongara Street and residents of Brookfield Road and Clarence Road affected by the new tollroad control centre.
Particular attention should be paid to the urban design of the underside of elevated structures at Enoggera Creek and Bowen Hills Precinct.
Council remains concerned that there is an overall net loss in park land resulting from the Project. Number of opportunities of State-owned parcels that could be dedicated to Council for open space to offset loss of public park (i.e. Addison Street, Grafton Street, Gennon and Albany streets, Windsor).
Council concerned that proposed staging of works and staged opening of Northern Busway may have significant impact on the Lutwyche Road corridor. Understood that Council will have role to approve Construction Traffic Management Plan that impact Council Roads for the Project. Appropriate capacity should be maintained for all major roads including Lutwyche Road, Bowen Bridge Road, and connections to the ICB and Clem Jones Tunnel.
Number of road network issues remain that can be addressed through detailed design (i.e. intersection analysis and design).
Need to ensure sufficient capacity of Hamilton Place/ Campbell Street intersection with possible provision of right turn pockets. Campbell Street should be designed with appropriate width to ensure service vehicle access to private properties. Concerns over safe operation of slip lane arrangements.
Bowen Bridge Road connection also provides connection to ICB and Clem Jones Tunnel with concerns over sufficient capacity. Proposed trap lane arrangements restricts Bowen Bridge

Road to two lanes. Concerns over safe operation of BP/ Hungry Jacks exit to Bowen Bridge Road and safe pedestrian movement along Bowen Bridge Road.
RfC does not provide expected traffic demand or justification for the reduction of the ICB to one lane and this is not supported. Proposed layout includes a traps lane arrangement that is not consistent with normal design approach. No clear indication how bikes would be treated through this area.
Council concerned with ability to respond to actual demand requirements with Clem Jones Tunnel connections restricted to one lane in each direction. Council concerned about capacity of connection to Lutwyche Road and trap lane arrangements to ICB and Clem Jones Tunnel.
Proposed right turn pocket at Windsor East (Gallway Street) does not provide sufficient long term capacity for this area and would result in significant safety and capacity issues if demand for the movement increases. Likely that significant redevelopment would occur in this area in the future. Long term arrangements for precinct should be addressed as part of the Airport Link project.
Proposed pick-up/ set-down facility at Woolloowin State School does not have sufficient capacity to ensure safe operation and no queuing on Lutwyche Road. Given school frontage on Lutwyche Road, pick-up/ set-down area should be provided on school grounds.
Council concerned with safe operation and capacity of outbound merge arrangements for general traffic at Gympie Road and Stafford Road precinct. Concerned about safe operation of access to local precinct and suggests consideration of closing Homebush and/or Broughton Road intersection. Suggested study be undertaken, with community consultation, to address these concerns.
Number of structures built over and within current creeks and floodways are in particularly sensitive areas an subject to existing flooding issues. Council requires all works for the Project to ensure no net increase in afflux and that all impacts are appropriately mitigated.

Submission No. 47
Summary of Issue/s
Department considers it crucial that the communities impacted by this project and other complementary infrastructure projects in the city's inner north are kept fully informed about project development issues and that appropriate measures are taken to ensure community concerns are monitored and responded to in a timely manner. Consideration should be given to providing additional resources to fund an appropriate locally based community agency/ network to more comprehensively and independently engage with government and the project consultants throughout the life of the project.
The RfC Report shows that the project is predicted to carry more traffic than forecast for the

EIS. Given the scale and duration of construction and the flow on effects to adjacent suburbs, the community impacts resulting from the changed project need to continue to be closely monitored.
The RfC Report details a wide range of environmental effects resulting from the project. While changes have mitigated a significant number of the anticipated impacts, there is continuing community interest in and concern about ensuring that such impacts are minimised and/or well managed.
<p>The importance of ongoing community consultations are maintained to ensure timely feedback about the effectiveness of measures taken and to ensure that the interests and concerns of residents and property owners are appropriately addressed, including:</p> <ul style="list-style-type: none"> • The impact of reclaiming eight additional properties as a result of the relocation of the tunnel control centre to Stafford Road; • The impact of tunnel ventilation outlets; • Potentially enhanced noise and vibration impacts for residents and the Woolloowin State School from the changed alignment; • Potential hydrology and flooding in Kedron Brook due to cut and cover construction; • Amenity impacts on Gallway Street and nearby areas resulting from the extended Windsor worksite; • Diminished access to Kalinga Park resulting from the expansion of the Clayfield worksite.
Continued monitoring of cultural heritage impacts is strongly endorsed, as is ongoing liaison with the relevant native title claimants.
Given current traffic congestion directly along, as well as in proximity to the haulage corridors, it can be anticipated that even small additional delays caused by the already high volume road surfaces will result in regular, vocal, public expressions of community concern. Under such circumstances, consistent monitoring of community information and consultation processes and maintenance of regular public updates on the project's progress are strongly recommended.

Submission No: 49
Submission issue/s
No concerns regarding the methodology used to predict air quality impacts from the Changed Project and agree with the conclusions drawn from the air quality assessment.
Understand that some information on the revised plans for Kalinga Park have been prepared for the Changed Project and submitted to the EPA. The Queensland Heritage Council may wish to vary the previous conditions for approval for works in Kalinga Park as a result of the revised information, particularly in relation to the protection of trees along the driveway

parallel to Kedron Brook.
No concerns regarding the methodology used to predict noise and vibration impacts from the Changed Project and note that the conclusion drawn from the assessment do not identify a significant increase in noise or vibration levels at predicted sensitive sites.
The Changed Project will require additional IPA/IDAS approvals for “prescribed tidal works” associated with the proposed conveyor from Toombul to the Airport, where it crosses tidal creeks. The approvals required for the Enoggera Creek end will also vary from those originally planned.
The proposed changes have only minor impacts on biodiversity protection.

Submission No: 50
Submission issue/s
Issues that relate to traffic congestion and disruption to traffic are of great interest to the Queensland Police Service. Queensland Police have not taken a view of what potential issues may arise as a consequence of the proposed changes.
Continued communication regarding the Airport Link Project as it relates to the Queensland Police Service will be greatly appreciated.