

MINUTES OF MEETING

Meeting Number 32

CLG	Toombul Community Liaison Group				
Location:	Visitor Information Centre, Lutwyche	Date:	12/07/11	Time:	6:00pm

These minutes are not intended to be a verbatim account of the CLG meeting but are a summary of the key issues raised, actions arising from the meeting and outcomes of actions raised at previous meetings.

Chaired By: Melissa Salisbury	Minuted By: Thiess John Holland	Distribution Date: 02.08.11 Revised & Redistributed: 24.08.11
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Attendees: Denise Keim (DK) Richard Clare (RC), David Russo (DRu), Mitchell Bright (MB), Peter Maddern (PM), Toby Murdoch (TM)
Anthea Craig (AC) – TJH, Georgina Thrum (GT) – TJH, Deirdre McCue (DMc) – TJH, David Hake (DHk) – TJH, Jamie Richters (JR) – TJH, Russ Beynon (RB) – TJH, David Rankin (DRa) – Brisconnections, Lauren Diamond (LD) – CNI, Melissa Salisbury (MS) - Facilitator, Jess Duncan – minute taker
Apologies: Barrie Spring (BS) – Facilitator), Michelle Barisic (MB) – CNI, Paul Atkinson (PA), Louise Litchfield (LL) – CNI, Charles MacDonald (CMac) – BrisConnections, Darren Bodimeade (DB), Robert Standish White (RSW), Ray Duggan (RD)
Not Present:

Distribution (Method e.g. email): Email
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Item	Summary
1.0	MEETING OPENED The Facilitator opened the meeting and apologies were noted.
2.0	ACTION ITEMS Action 1 – TJH to use the access road as opposed to residential streets when decommissioning the Kalinga Park site. TJH advised that the demobilisation plan has not been finalised. Infrastructure, including the chillers, will be removed under the railway lines unless they are too big. With the initial demobilisation of TBM support equipment such as the grout plant, compressors and spoil conveyor will be taken out via the construction access road. Action 2 –TJH to follow up with road authorities about the traffic island at Widdop Street. TJH advised that BCC have advised that they will take ownership of the traffic island located outside Centro Toombul and it will stay in its current location. Action 3 – Look into maintenance upstream of the Widdop Street bridge and along the East West Arterial Road noise barrier. TJH advised that clearing around Schulz Canal has taken place and that the weeds along noise barrier have been sprayed however, are not able to be removed without a lane closure in place. This will need to happen during night work and will likely occur at the same time as work on the noise barrier panels. Action 4 – Present further detail about permanent Air Quality Monitoring Stations. The BrisConnections representative will address this action item in their presentation.

MINUTES OF MEETING

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CLG	Toombul Community Liaison Group			
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	<p>Action 5 – Look into dust along the Widdop Street footpaths and cleaning up the banks of Schulz Canal.</p> <p>TJH advised that a site walk was conducted and corrective actions identified as a result. A second walk was conducted yesterday which confirmed that the requested work had been completed.</p> <p>A CLG Member advised that there was rubbish along the fence line.</p> <p>TJH advised that the area cleaned up by TJH was outside of TJHs limit of works and area of control and was carried out in good will.</p> <p>The Member asked about the long grass on the eastern side of the site offices heading towards Widdop street on both sides of the creek bank.</p> <p>TJH advised that area was cleaned at late April early May 2011. TJH will continue to monitor the area and ongoing maintenance will be addressed as part of TJHs maintenance schedule.</p> <p>ACTION: TJH to look at the area to the east of the site offices and continue to monitor the area.</p> <p>A CLG Member asked when the landscaping design will be made available to the CLG.</p> <p>TJH is hosting a community information session on 23 July and landscaping information will be made available at this time. TJH noted that the CLG Members are welcome to attend the session. Information used for the session will be made available at the August CLG meeting.</p>
3.0	<p>CONSTRUCTION UPDATE</p> <p>Presentation made by Russ Beynon, North Eastern Regional Director, Thiess John Holland. The presentation is provided as an appendix to these minutes.</p> <p>Points covered</p> <p>Toombul Site Overview</p> <ul style="list-style-type: none"> Jacking of both boxes under the rail line is now complete Work is continuing in the high bay area to install corbels in preparation for installation of smoke ducts <p>Tunnel Portal Trough</p> <ul style="list-style-type: none"> Excavation and concreting of the trough along East West Arterial Road is nearing completion Works for the Fire Deluge Facility at the Widdop Street off-ramp are continuing <p>Sandgate Road</p> <ul style="list-style-type: none"> Sandgate Road and East West Arterial Road was switched to its final alignment late May 2011 Small amount of bulk excavation at the western end of the trough before drive through access is available. This involves installation of props and excavating underneath them to join both sides of the Sandgate Road bridge

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	<p>Sandgate Road Bridge Excavation</p> <ul style="list-style-type: none"> Excavation underneath the new Sandgate Road bridge is complete Drainage and blinding is being installed in preparation for the base slab to be poured <p>CC430 – Tunnel Portal</p> <ul style="list-style-type: none"> Drainage lines are being installed <p>Fire Pump Station</p> <ul style="list-style-type: none"> Precast walls for the fire deluge facility and pump room have been installed The control room pumps water into the tunnel through a sprinkler system <p>VSO Stairwell Access</p> <ul style="list-style-type: none"> Two stairwell access points have been installed above the ventilation station They will allow for access into the VSO for maintenance and access out in case of an emergency One stairwell is located adjacent to the Ventilation Station Outlet and the second stairwell is located at the rear of Alma Road <p>Jacking Box</p> <ul style="list-style-type: none"> Both boxes are now in position Temporary works to demolish the rafts, shields and tails is ongoing Demolition at the front and rear of the boxes will expose reo to allow for a stitch pour to connect the carriageway walls To remove the raft approximately 900 cores are being drilled down into the base of the raft to break up the tension piles that were used to hold the structure down Saw cutting and wire ropes are being used to remove the shield and tail. This method was used rather than heavy demolition to reduce noise impacts. Capping edge beams are being installed along the diaphragm walls <p>Base Slab & Wall Construction</p> <ul style="list-style-type: none"> The base slab is the last major structural work to be completed Walls are being constructed which will act as carriageway dividers Edge beams have been installed which will be followed by the installation of smoke ducts and roof slab Anchors are being installed and there is a small amount of dirt from the box push is left to be excavated <p>Smoke Ducts CC421 – 410</p> <ul style="list-style-type: none"> Majority of the corbels have been installed The smoke duct sits on top of the corbels

MINUTES OF MEETING

Meeting Number 32

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	<ul style="list-style-type: none"> The installation of corbels is a complex process which takes a lot of time There is a small section near the spoil conveyor that is being completed The high bay gantry will be used to install the smoke ducts Once the smoke ducts are in place, another layer of work will take place in preparation for installation of the roof Once this is complete this area, including the shed, can be demobilised <p>Discussion and questions arising:</p> <p>A CLG Member asked what the structure was behind the smoke stack. TJH advised these are the access stairwells for the ventilation station. This is an underground building that requires maintenance and to comply with Australian Building Standards, access needs to be provided to the surface.</p> <p>A CLG Member asked who will be responsible for graffiti on these stairwells and if painting the outside with an anti-gravity finish has been considered. TJH advised that for the first 12 months TJH are responsible for maintenance after which BrisConnections are responsible as the owner operators of the asset. Maintenance must comply with BCC requirements.</p> <p>Urban landscaping is yet to be installed which will provide some cover for these access points.</p> <p>BrisConnections advised that anti-graffiti finishes have fallen out of favour with DTMR as they pose a health hazard to the employees applying it and this process does not remove all the graffiti. It is easier, safer and more cost effective to repaint the graffitied area.</p> <p>A CLG Member asked when and how the conveyor belt will be removed. TJH advised that the conveyor will be progressively removed. The belts have already been taken off and the structure has been removed from both tunnels. There are four to five key points of the conveyor that will be removed first followed by the remainder.</p> <p>The Member asked when the spoil shed at Nudgee Road would be removed. TJH advised that the shed would be removed in September 2011. Some spoil still needs to be removed from the tunnel cross passages and the shed is being used to store, treat and remove this material.</p>
4.0	<p>TUNNELLING CONSTRUCTION UPDATE</p> <p>Presentation made by David Hake, TBM Construction Manager, Thiess John Holland. The presentation is provided as an appendix to these minutes.</p> <p>Points covered</p> <p>TBM Progress as at 6 July 2011</p> <ul style="list-style-type: none"> Rocksy has progressed 246.6 meters since the last meeting

MINUTES OF MEETING

Meeting Number 32

CLG	Toombul Community Liaison Group				
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	<ul style="list-style-type: none"> Sandy has progressed 236.6 meters since the last meeting Both TBM's have now completed tunneling and will shortly be moved into the burial chambers Breakthroughs occurred last week, Rocky at 10.30am on Monday, 4 and Sandy at 1pm on Wednesday, 6 July 2011 <p>Demobilisation of TBM plant</p> <ul style="list-style-type: none"> The spoil conveyor has been removed from both tunnels. Removal of the conveyor on the surface will be ongoing over the next 10 weeks and involves parts and handling TBM's will be buried in late July 2011 The back end of the TBMs will be removed July to September Support infrastructure including the grout plant, chillers and spoil shed will be demobilised August to September The high bay gantry in Kalinga Park west will be removed in October followed by the low bay structure December to January <p>Ongoing Works</p> <ul style="list-style-type: none"> Smoke duct construction will continue to October Cross passages including excavation and lining will continue to December Pavement and barriers will be installed by October Tunnel mechanical and electrical fit out will be ongoing to February 2012 <p>TBM Burials</p> <ul style="list-style-type: none"> Both TBM's will be pushed onto the bridges at the edge of the burial chamber using overhead cranes ready to be placed onto sliding cradles which will enable them to slide further over the bridge beam and lowered down into the chambers The north bound cutting face is already in the sliding cradle Targeting to lower the first cutter face on Monday, 18 July and the second on the following Wednesday <p>Cross Passages</p> <ul style="list-style-type: none"> Cross passages have been finished up to the Kedron Caverns and handed over to MEFT Seven cross passages need to be completed to get to where the TBM's are located The cross passages from Kedron to Lutwyche are currently being completed Harder rock is being encountered with cross passages at the Lutwyche end The softer ground towards Toombul required steel structures to be installed to create the openings Hard ground means the openings at Lutwyche can be cut out and excavated Waterproof lining has been installed

MINUTES OF MEETING

Meeting Number 32

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	<p>Smoke Duct</p> <ul style="list-style-type: none"> • Painting of the roof with black paint has been completed • Mechanical and electrical fit out is following the installation of tunnel lining • Pavement will start to be installed in October <p>Settlement Drawings were provided for the CLG Members to view</p> <ul style="list-style-type: none"> • The amount of movement is negligible • There is limited data this month as the TBM's are located under the TJH site at the corner of Chalk Street which is occupied by TJH <p>Discussion and questions arising:</p> <p>A CLG Member asked how long the high bay gantry will be in place. TJH advised the gantry will be in place until October 2011 followed by removal of the shed in January 2012.</p> <p>A CLG Member asked when the chillers and grout plant would be removed. TJH advised the chillers stopped being used on Friday, 8 July and will be removed shortly. The grout plant is still in use but will be finished by the end of this week.</p> <p>A CLG Member asked when all noise from Kalinga Park will cease. TJH advised that the chillers plant closed last week and the grout plant should be finished tomorrow. The compressors are still in operation as is the crane which will continue to be used to move materials and equipment.</p> <p>The Member asked what the cranes are shifting. TJH advised that the crane is servicing the TBM operation including cross passage and smoke duct installation by removing and delivering equipment and materials.</p> <p>TJH advised the TBM construction manager will no longer attend CLG meetings however, TJH will continue to provide tunnelling updates at the meetings.</p>
5.0	<p>ENVIRONMENTAL MONITORING UPDATE</p> <p>Presentation made by Jamie Richters, Environment Coordinator, Thiess John Holland. The presentation is provided as an appendix to these minutes.</p> <p>Points covered:</p> <p>Noise Monitoring</p> <ul style="list-style-type: none"> • 27 internal monitoring sessions were conducted • 149 external monitoring sessions were conducted • 5 requests by TJH were made for entry but were declined • There were 2 exceedences

MINUTES OF MEETING

Meeting Number 32

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	<p>Vibration Monitoring</p> <ul style="list-style-type: none"> Conducted at five locations across the TBM alignment with 0 exceedances 673 Lutwyche Road, 676 Lutwyche Road, 9 Norman Ave, 9 Isedale Street and 7 Felix Street <p>Air Quality Monitoring</p> <ul style="list-style-type: none"> Was conducted at 3 locations with 0 exceedances <p>Noise Monitoring Exceedence</p> <ul style="list-style-type: none"> An I(A)eq exceedence was recorded at 83 Toombul Terrace with the windows opened The exceedence was attributed to a mixture of TJH and non-TJH noise that were amplified by a south-west wind TJH noise was from the chillers and conveyor A follow up session was conducted with no exceedences recorded <p>Discussion and questions arising:</p> <p>A CLG Member asked if previous monitoring sessions had been conducted at this location prior to this exceedence being recorded.</p> <p>TJH advised that a number of external noise monitoring sessions were completed in the area including in the Toombul Terrace cul-de-sac. Previous noise monitoring had not identified exceedences in this location.</p> <p>A CLG Member advised that there is always non-TJH noise listed in the comments section and feels that detailing noise amplification by the wind is an excuse used by TJH to show that the noise doesn't belong to TJH.</p> <p>TJH advised that L(A)eq is hard to isolate where L(A)max is easier to identify as these are the loud one-off noises.</p> <p>TJH advised that the environmental officer reports what is heard at the time of the session. In this instance it has been recognised that the chiller and conveyor did contribute to the L(A)eq exceedence. There is a need to report on all noises that are heard and factors such as wind so the report is a true representative of the conditions at the time of the session. Further monitoring will be carried out in this location as a follow up.</p> <p>The CLG Member asked if there is a difference in monitoring with doors and windows open or closed.</p> <p>TJH advised that monitoring with doors and windows open captures normal living conditions. Monitoring with windows and doors closed indicates the attenuation of the house and assists to identify suitable mitigation if required.</p> <p>The CLG Member noted that they are under the impression that having doors and windows closed was a condition of monitoring.</p>

MINUTES OF MEETING

Meeting Number 32

CLG	Toombul Community Liaison Group			
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	<p>TJH advised that if a property has mitigation in place, it must be active at the time monitoring is undertaken. For example if air conditioning has been installed by TJH as mitigation then it is expected that windows and doors would be shut to allow the mitigation to work. This also enables TJH to monitor how effective the mitigation is.</p> <p>Mitigation that is put in to minimise noise from construction is assessed with consideration for individual circumstances.</p> <p>When a noise complaint is made TJH offers internal noise monitoring and the process for internal monitoring is explained at this time. The complainant is advised if mitigation needs to be active whilst the monitoring session takes place.</p> <p>The Member believes that TJH has previously covered up its responsibility by saying that mitigation has to be in place and that this is the first time in the past has heard TJH's monitoring process articulated in this manner.</p> <p>A CLG Member advised that at the beginning of the Project, TJH insisted that doors and windows be shut prior during a monitoring session. The Member noted that residents refused monitoring as it seemed farcical that it be completed with the doors and windows shut.</p> <p>TJH advised that the environmental reports, which are available online, outline this process and can be viewed by the public. During the CLCs time at Toombul monitoring has always been done with windows open and closed.</p> <p>A CLG member stated that monitoring had not always been done with windows open and closed. The member asked a TJH representative who was involved with the project when internal monitoring was first undertaken to clarify the point. The member asked that the TJH representative acknowledge that, when internal monitoring first took place, residents were told that it could only occur with windows and doors closed.</p> <p>TJH further advised that at the start of the Project monitoring was carried out to assess the existing conditions as well as the attenuation of properties. This was carried out to assess if mitigation was required. Mitigation that is provided may require that doors and windows be shut for it to be effective.</p> <p>The Member stated that the residents were agreeing to monitoring to assess the level of the night time noise that they were experiencing in their bedrooms. This was taking place in summer, when their windows and doors were open and they were the conditions under which monitoring should have taken place.</p> <p>TJH advised that TJH would have asked for that to happen to assess the attenuation of the building. If by closing the windows shows a reduction in noise levels to below the goal levels then a form of ventilation ie. air conditioning is offered as mitigation to allow windows to be closed during construction.</p> <p>A CLG Member noted that mitigation was delivered after night works had started, so for the previous six months that construction was occurring, monitoring should have taken place but no one was offered pro-active mitigation.</p> <p>TJH advised that this was not the case.</p> <p>TJH used predictive modelling and proactively approached 20 front-line residents before night works commenced with the offer mitigation. These residents were located in Jackson, Lewis and Kalinga Streets. As the project and works progressed residents in other areas were also approached.</p>

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	<p>The Member asked if these residents backed onto Kalinga Park. TJH advised that the majority were in the vicinity of Kalinga Park.</p> <p>A CLG Member asked if anyone in Wongara Street was approached. TJH advised that no one in Wongara Street was approached as predictive noise modelling did not indicate that noise would be above the goals in that location.</p> <p>A CLG Member advised that people along the back of Kalinga Park were only approached once night work commenced and TJH did not speak to anyone on the other side of the road. TJH advised that residents across the road were spoken with at this time which included the member and one of the members neighbours.</p> <p>The member stated that this was incorrect. There was no consultation with the member or the neighbours prior to night work commencing and TJH did not initiate any discussion with these residents. Discussions regarding mitigation only took place after many complaints by the residents. TJH disagreed.</p> <p>The Member believes this was reactive not proactive consultation. TJH advised that as work moved into night works and the predictive noise model showed potential issues in the adjacent area then TJH commenced consultation with these residents. As work continued, if exceedances were recorded, more residents were spoken to.</p> <p>A CLG Member believes that TJH moved the goals based on the residential categories. TJH advised that it was based on a raw number to start with and not based on categories.</p> <p>A CLG Member noted that TJH did not consult the member in advance and that a complaint had to be lodged to get monitoring conducted.</p> <p>A CLG Member acknowledged while some pre-mitigation may have occurred adjacent to the main site, to his knowledge, this had not occurred on the Eastern side of the worksite. He seriously questioned the accuracy of TJH's statement and was concerned history was being rewritten.</p>
6.0	<p>COMMUNITY RELATIONS UPDATE Presentation made by Anthea Craig, Community Liaison Coordinator, Thiess John Holland. The presentation is provided as an appendix to these minutes.</p> <p>Points covered</p> <p>Community Feedback</p> <ul style="list-style-type: none"> • There was a reduction in the number of complaints received in June

MINUTES OF MEETING

Meeting Number 32

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	<ul style="list-style-type: none"> • 24 complaints were received from 21 stakeholder • 17 issues were raised from 15 stakeholders • Site noise out of hours was the biggest source of complaints although most of this was attributed to special circumstances work taking place along Sandgate Road for reinstatement of the footpath and finalisation of the Sandgate Road and East West Arterial Road intersection. <p>Community Notifications</p> <ul style="list-style-type: none"> • 15,530 flyers were distributed in June including: • June Construction Update • Update: Wongara St Corner • Update: Service Relocation & Installation • Night Works East West Arterial Road • Night Works: Sandgate Road Footpaths • Night Works: East West Arterial & Sandgate Road Intersection • Night Works: Sandgate Road Footpaths • Tunnelling Update: Tunnel Boring Machines <p>Community Relations Activities</p> <ul style="list-style-type: none"> • Doorknocks for Sandgate Road night works inc. footpath upgrade and water cleaning • Doorknock Wongara Street residents re: <ul style="list-style-type: none"> ○ Work on storm water pits and drainage on East West Arterial Road ○ Concreting barriers along eastbound East West Arterial Road ○ Day and night works in Wongara Street corner worksite • Doorknock re Jacking Box demolition works • Doorknock re TBM excavation & cross passage works • Resident liaison: <ul style="list-style-type: none"> ○ Sandgate Road re work after Telstra upgrade ○ Wongara & Widdop Streets and Melton Road re concreting along East West Arterial Road ○ Aviation High School re permanent air-quality monitoring • Monitoring worker parking on local streets <p>Community Information Session</p> <ul style="list-style-type: none"> • Scheduled to take place on 23rd July at Stuckey Road, at the end closest to the construction site. • Information will include landscaping design and demobilisation requirements • Site tours will be run every 20 minutes for those that are interested • TJH are speaking with local residents to ensure access is maintained to their properties • TJH are open for suggestions of topics that should be covered at the information session

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Meeting Number 32

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	<p>Discussions and Questions arising:</p> <p>A CLG Member asked what landscaping information will be available. TJH advised that the information provided will be similar to what was presented previously to the CLG. Additional information will include answers to some of the questions that were raised by CLG Members and a more detailed plan overlaid onto an aerial image.</p> <p>The Member asked if the landscaping plan will be available at the community information centre. TJH advised that information used at the community information session will be made available at the visitor information centre. TJH noted that if the weather is bad on the 23rd then the community information session will be moved to the visitor information centre.</p> <p>A CLG Member asked if issues are not closed out, are they carried into the next months reporting period. TJH try to close complaints out by addressing the issue as soon as possible. Ongoing investigations are not reflected in the monthly chart and will only be reported on in the month it was raised. The monthly community complaints report is available on line. This report indicates broad-scale major issues and details the issue raised and how it was addressed. The complaint is only recorded for the period it was reported in. If the stakeholder is not happy with the result they may call back again to report the issue.</p>
7.0	<p>PRESENTATION – OPERATIONAL AIR QUALITY MONITORING</p> <p>Presentation made by David Rankin, BrisConnections. The presentation is provided as an appendix to these minutes.</p> <p>Points covered:</p> <p>Planning approval conditions</p> <ul style="list-style-type: none"> • Deed Conditions - Exhibit B - Planning Approval • The conditions have been built into the deed • This information is available on the Brisconnections website • Ongoing monitoring is required at two stations for each outlet • Stations must be located within 500m of the outlet • The preferred location for one of the stations is within Kalinga Park • The monitoring process should be reviewed after five years • If Brisconnections wants to make a variation to the monitoring and reporting process they need to provide substantiated reasons to the Coordinator-General • This evidence will need to be validated by an expert • This may be done if the results are consistent and has to do with the high running cost of operating the machines • The Lane Cove tunnel in Melbourne has started to decommission their units as they are performing as per the design <p>Ambient Goals</p>

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	<ul style="list-style-type: none"> • Is the air outside the tunnel • Carbon Dioxide, Nitrous Oxide and Particulate matter are monitored • There are 5 days of exceedences allowed per year for instances when circumstances are beyond the control of BrisConnections <p>In Tunnel Air Quality</p> <ul style="list-style-type: none"> • Air quality differs to other requirements • Particulates are not measured however Carbon Dioxide, Nitrous Oxide and Visibility are <p>Reporting</p> <ul style="list-style-type: none"> • Reports must be prepared every six months on how BrisConnections are meeting operational requirements • There is also an Operations Exceedence Report that must be prepared if there are any exceedences. • Real time reporting for non-validated data is reported in directly to the BrisConnections website • This means that the scientific data has not been validated and may be corrupted • The data will need to be assessed for real time anomalies such as bush fires and dust storms • Clem7 also reports in this manner <p>Tunnel Ventilation System</p> <ul style="list-style-type: none"> • Is designed to make sure the air in the tunnel and the air being release meets operational conditions • Air cannot flow out of the portals. Air has to go via the Ventilation Station Outlets • In case of a fire, the ventilation system will control smoke levels within the tunnel. • The smoke ducts have 500 dampers, which are louvers, in the bottom that will open and extract smoke in the case of a fire. • This changes the operation of the Ventilation Station Outlet to extract smoke <p>Ambient Air Quality Stations</p> <ul style="list-style-type: none"> • The three Ventilation Station Outlet sites are Bowen Hills, Kedron and Toombul • Kedron is the biggest of the three outlets • Toombul picks up the air from the east bound tunnel • Jet fans drive the air to an extraction point which is the outlet <p>Proposed Sites of Ambient Air Quality Stations</p> <ul style="list-style-type: none"> • Bowen Hills - Northey Street and Cartwright Street. The Cartwright Street site will hopefully utilise the RiverCity Motorway Monitor. • Kedron - Kedron High School and ALOC • Toombul - Aviation High and Kalinga Park

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	<ul style="list-style-type: none"> Baseline monitoring at these locations is currently being conducted <p>Discussion and questions arising:</p> <p>A CLG Member asked why air cannot come out the portals. Brisconnections advised that environmental conditions require that the air inside the tunnel does not escape to the local community. The Ventilation Station Outlet (VSO) creates dispersion. Research is being done to try see if some emissions from portals is possible when there are fewer cars in the tunnels. Baseline monitoring needs to be conducted 12 months prior to operation of the tunnel.</p> <p>A CLG Member asked how big the monitoring stations are. Brisconnections showed the slide with the station that is already set up in Kedron High School. Brisconnections advised that the box sits on a steel platform. The box contains scientific equipment and air conditioning to make sure the equipment works. A measuring device sits on the roof. Where there is potential for flooding, such as in Aviation High, the monitoring station is positioned on a platform.</p> <p>A CLG Member noted that the monitoring station for Aviation High was already located in the car park.</p> <p>A CLG Member asked for further information about the recommendation for a monitoring station in Kalinga Park. Brisconnections advised that the stations needed to be set up on either side of the outlet and within 500m as per the conditions. BrisConnections have chosen locations for the stations on either side of the outlet as these sites will provide representative data across the different seasons when wind directions change.</p> <p>A CLG Member asked if there are any calculations that show a net benefit/loss from operation of the tunnel. Brisconnections advised that one of the positives of the tunnel system is that vehicles are taken off the street and the air is dispersed in the upper atmosphere. This means reduced car emissions and improved air quality at ground level. Greater power demands will arise from operation of the tunnel.</p> <p>ACTION: BrisConnections to report back if there have been any calculations done on the emissions from the tunnel.</p> <p>A CLG Member asked how important the prevailing wind direction is to the location of the monitoring stations. Brisconnections advised that the location is very relevant and is referred to in the conditions. Both the summer and winter winds have been taken into account when BrisConnections identified locations. BrisConnections have spent months trying to find appropriate locations and found it hard to source sites for the monitors. Brisconnections needed to meet two objectives which were to have them set up to capture seasonal</p>

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Item	Summary
	<p>variations and to get suitable location. After five years, there may be a requirement to leave the monitors in place for longer.</p> <p>A CLG Member believes the prevailing winds will not reach the site at Aviation High. Brisconnections advised that the site will pick up westerly winds and that the school is a sensitive receptor.</p> <p>ACTION: BrisConnections to report back on the Aviation High site's ability to collect data from the prevailing winds.</p> <p>A CLG Member asked if there is a measure of the air quality at the point of extraction. No. Brisconnections is aware of monitoring that was attempted in Sydney and the device failed due to particulates affecting the sensitive scientific equipment.</p> <p>A CLG Member asked if particulate matter is measured within the tunnel. Brisconnections advised that visibility is monitored, but is unsure about particulates.</p> <p>ACTION: BrisConnections to report back if particulate matter is monitored in the tunnel.</p> <p>A CLG Member asked if public consultation will take place after the five years of operation to determine if the monitors will still be operational. BrisConnections advised they need to submit a request to the CoG, but will find out if public consultation is part of the process and report back.</p> <p>ACTION: BrisConnections to report on whether a public consultation period is part of the five year review process for the monitoring stations.</p> <p>A CLG Member asked if the monitoring stations are removed, how will Brisconnections know if there has been a malfunction within the ventilation stations. Is there any other measure that gives information on tunnel performance. BrisConnections advised that the decommissioning process and report tendered to the CoG would need to take into account what would be done in this circumstance. DERM conducts local monitoring.</p> <p>A CLG Member asked why the monitors are referred to as permanent if there is a chance they may be removed. Brisconnections advised that the monitors can only be removed after agreement has been reached with the CoG</p> <p>A CLG Member asked what height air will be dispersed to. Brisconnections advised that velocity is used to determine the dispersion rate not height in meters.</p> <p>ACTION: BrisConnections to report back on the velocity of emissions being dispersed from the VSO.</p>

MINUTES OF MEETING

Meeting Number 32

CLG	Toombul Community Liaison Group			
Location:	Visitor Information Centre, Lutwyche	Date:	12/07/11	Time: 6:00pm

Item	Summary
	<p>A CLG Member asked that given BCC has responsibility for Kalinga Park have they been approached about an air quality monitor being placed in Kalinga Park. Brisconnections advised that the BCC was approached and that they declined to have the station within the Park. The site that BrisConnections hope to secure is 20m from Kalinga Park.</p> <p>A CLG Member asked how far Aviation High is from the VSO and how high the VSO is. Brisconnections advised that Aviation High is approximately 460m from the VSO.</p> <p>TJH advised that the VSO is approximately 26m high.</p> <p>A CLG Member advised that he has seen thermal imaging, from Sydney and the air does not come down until it cools, and feels that Aviation High is too close to capture this fallout and that the monitor should be further away. TJH advised the location of the monitor is dictated in the conditions and that it cannot be changed. DERM also conduct monitoring in the areas as well.</p> <p>ACTION: TJH to report back on the location of DERM monitors and what they monitor.</p> <p>A CLG Member asked when answers to the raised questions will be answered. TJH advised that the questions will be taken as actions and included in the minutes.</p> <p>A CLG Member advised that although schools are sensitive areas, the kids are not there 24/7 and that people spend more time at home. The Member feels there should be more coverage for residents that may be exposed. The Member asked if the school charges rent for their land. Brisconnections advised that the school does charge for the use of their land.</p> <p>A CLG Member asked if BrisConnections had ever seen air come out of a VSO. Brisconnections has never seen air coming from the Clem 7 Bowen Hills VSO, aside from when smoke tests were being conducted and it couldn't be heard either.</p>
8.0	<p>GENERAL BUSINESS</p> <p>A CLG Member wanted clarification as to whether the final design for noise wall behind the properties in Wongara Street had been signed off by CNI. The Member also noted that residents the member has spoken with have a preference for the panels to be left as they are and not painted, especially in the area where the wall it is not high. The majority of residents at the western end of Wongara Street are renters and the member has not spoken with them to get their opinion. TJH advised that CNI have signed off on the noise barrier but have not agreed on the paint finish. TJH will canvas the residents of Wongara Street again as the initial consultation carried out indicated a strong support for the panels to be painted.</p> <p>ACTION: TJH to canvas Wongara Street residents regarding painting of the polycarbonate panels of</p>

MINUTES OF MEETING

Meeting Number 32

CLG	Toombul Community Liaison Group			
Location:	Visitor Information Centre, Lutwyche	Date:	12/07/11	Time: 6:00pm

Item	Summary
	the noise barrier.
	Next meeting: Tuesday, 9 August 2011, 6pm – 8pm Visitor Information Centre, Lutwyche

Upcoming Meetings in 2011

13 SEPTEMBER
11 OCTOBER
8 NOVEMBER
13 DECEMBER



Toombul

Construction Update

Russ Beynon

12th July 2011

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Toombul Site Overview



Toombul

Tunnel portal trough



Toombul

Sandgate Road



Toombul

Sandgate Rd Bridge excavation



Toombul

CC430 – Tunnel Portal



Fire Pump Station



VSO Stairwell Access



Jacking Boxes



Demolition of jacking raft and tail



Base Slab and wall construction



Excavation and anchor installation (CC421)



Smoke Ducts Corbels (CC421 – 410)



Tunnelling Update

David Hake, TBM Manager

12th July 2011

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TBM Progress as at 6 July 2011

	Rocksy	Sandy
Excavation	2378m	2264m
Depth from surface to tunnel crown	25m	26m
Metres since last meeting	246.6m	236.2m



LEGEND:
■ Benching
■ Invert
■ Final Lining
■ Cross Passages

TBM tunnel breakthroughs



Rocksy 4th July 2011

Sandy 6th July 2011

Demobilisation of TBM Plant

Underground

- July - Conveyor and services removal
- July to Sept - TBM Burial and removal of TBM backup

Surface

- July – removal of tunnel conveyor and minor TBM parts
- August to September – grout plant, chiller plant, overland conveyor, Nudgee Rd shed
- October – Kalinga Park high bay structure
- December to January - Kalinga Park low bay structure

Ongoing Works

Underground

- July – October - Smoke duct construction
- July to December - Cross passages (excavation & lining)
- October – Pavement and barriers
- Ongoing to February – Tunnel M&E fitout

TBM Burial



Cross Passages



XP28

XP27

XP26

Smoke Duct & Fitout



Environment Update

Jamie Richters

12th July 2011

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Monitoring Summary



	Noise		Vibration	Air quality
	Internal	External		
# of monitoring sessions	27	149	5	3
# of exceedances	2	NA	0	0
# of sessions requested & declined	5	NA	0	0

Monitoring Summary Vibration Equipment Locations



Locations listed above: 673 & 663 Lutwyche Rd, 9 Norman Ave, 9 Isedale St, 7 Felix St

Construction Noise Monitoring Results

Location	Monitoring Period	Measured Noise	COG Goal	Measured Noise	COG Goal	Comments
		L(A)eq	L(A)eq	L(A)max	L(A)max	
83 Toombul Tce, Clayfield	2002 – 2017	44.5	35	47.9	50	Windows and doors open. Monitoring indicates elevated L _{eq} level. Elevated level was due to a combination of traffic (Sandgate Rd) and T _{JH} noise (chiller and conveyor operation) – caused by wind carrying and amplifying both T _{JH} and non-T _{JH} noise. Results were discussed with stakeholder and a follow up session arranged.
	29/06/11					
83 Toombul Tce, Clayfield	2024 – 2039	34.7	35	37.8	50	Windows and doors closed. Monitoring indicates L _{eq} and L _{Amax} levels below CoG goals. T _{JH} noise sources (being on site, hum of chiller and conveyors) and non-T _{JH} noise sources (resident, traffic, planes, passing train).
	29/06/11					



Community Relations Update

Anthea Craig, Community Liaison Coordinator

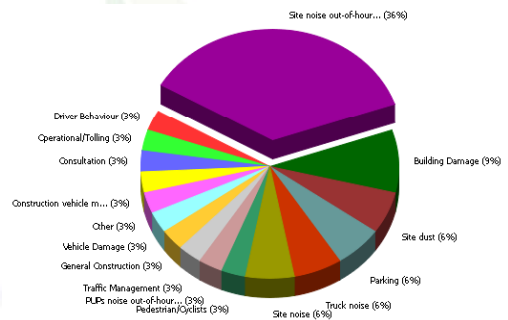
12th July 2011

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Toombul Community Feedback 1 – 30 June 2011

Community feedback	Total for June	Total for May	Total for April
Complaints	24	38	29
Stakeholders	21	24	19
Issues/enquiries	17	31	47
Stakeholders	15	25	39

Toombul Community Complaints 1 – 30 June 2011



Community Notifications

Total of 15,530 flyers distributed in June:

- June Construction Update
- Update: Wongara St Corner
- Update: Service Relocation & Installation
- Night Works East West Arterial Road
- Night Works: Sandgate Road Footpaths
- Night Works: East West Arterial & Sandgate Road Intersection
- Night Works: Sandgate Road Footpaths
- Tunnelling Update: Tunnel Boring Machines

Community Relations Activities

- Doorknocks for Sandgate Rd night works inc. footpath upgrade & water cleaning
- Doorknock Wongara St residents re:
 - Work on storm water pits and drainage on East West Arterial Road
 - Concreting barriers along eastbound East West Arterial Road
 - Day and night works in Wongara St corner worksite
- Doorknock re Jacking Box demolition works
- Doorknock re TBM excavation & cross passage works

Community Relations Activities

- Resident liaison
 - Sandgate Rd re work after Telstra upgrade
 - Wongara & Widdop St's and Melton Rd re concreting along East West Arterial Rd
 - Aviation High School re permanent air-quality monitoring
- Monitoring worker parking on local streets

Community Information Session

When: 9:30am - 12pm, Saturday 23 July

Where: Stuckey Rd (end closest to construction site)

Information available will include landscaping designs and demobilisation requirements. You'll also have a chance to see behind the noise barriers and view the Kalinga Park construction site.





Overview of Operational Air Quality Monitoring

Updated 11-7-11




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Operational Air Quality Monitoring

- Planning Approval Conditions
 - Ambient Air Monitoring Requirements
 - In tunnel Air Quality Goals
 - Ambient Air Quality Goals
 - Reporting Requirement
- Tunnel Ventilation System
- Proposed Sites for Ambient Air Quality Stations




Deed Conditions - Exhibit B - Planning Approval

— APPENDIX 1 > Schedule 3 Imposed Conditions > Operation Phase > 19. Air Quality

(k) On-going monitoring of ambient air quality must be conducted at two monitoring stations for each ventilation outlet. The monitoring stations must be located within 500 metres of each ventilation outlet.⁶


6 For the north-eastern ventilation outlet, the preferred location for one monitoring station is in Kalinga Park. For the north-western ventilation outlet, the preferred location for one monitoring station is in the campus of Kedron High School. For the southern ventilation outlet, the preferred location for one monitoring station is Eildon Hill reservoir, Constitution Road, Windsor.




Deed Conditions - Exhibit B - Planning Approval

— APPENDIX 1 > Schedule 3 Imposed Conditions > Operation Phase > 19. Air Quality

(n) The location and reporting of monitoring of ambient air quality relating to tunnel operations should be reviewed by the Proponent after 5 years of operations. Should a decision be made to vary ambient air quality monitoring or reporting, a report assessing the issue and providing substantiated reasons for the decision is to be provided to the Coordinator-General for comment prior to the implementing of the decision.






Ambient Air Quality Goals

Table 8: Ambient Air Quality Goals

Pollutant	Goal	Unit	Measuring Period
Carbon monoxide (CO)	8 or 10	ppm mg/m ³	8 hour maximum*
Nitrogen dioxide (NO ₂)	62	µg/m ³	annual mean
	0.12 or 246	ppm µg/m ³	1 hour maximum
Particulate matter less than 10 µm (PM ₁₀)	50	µg/m ³	24 hour maximum **
	50	µg/m ³	annual mean
Particulate matter less than 2.5 µm (PM _{2.5})	25	µg/m ³	24 hour maximum
	8	µg/m ³	annual mean
Total suspended particulate matter (TSP)	90	µg/m ³	annual mean

* One day per year maximum allowable exceedence.
 ** Five days per year allowable exceedence, not including exceedence in ambient goals due to external events (eg dust storms, fires, major construction works)





In-Tunnel Air Quality Criteria

Table 7: In-Tunnel Air Quality Criteria

Carbon monoxide (CO)	70 ppm generally 90ppm in peak traffic congestion
Nitrogen dioxide (NO ₂)	1 ppm (average)
Visibility coefficient	0.005 m ⁻¹

Source: PIARC guidelines



Reporting

CoG Planning Approval Table 6: Operations Compliance Report

- Six-monthly
 - compliance with Coordinator General's conditions;
 - satisfaction of environmental objectives and EMP requirements;
 - response to incidents of non-conformance, including where necessary corrective actions, revised operations practices, responsibility and timing.
 - all other matters pertaining to environmental performance during operations.
- Operations Incidents and Exceedance Report
- Air Quality Reporting
 - Real-time Reporting
 - For in-tunnel air quality, to be updated on an hourly basis (unvalidated) and to be available on-line via a project website.
 - Daily Reporting
 - For ambient air quality, reporting of hourly unvalidated data to be reported and available daily on-line via a project website.



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Tunnel Ventilation System

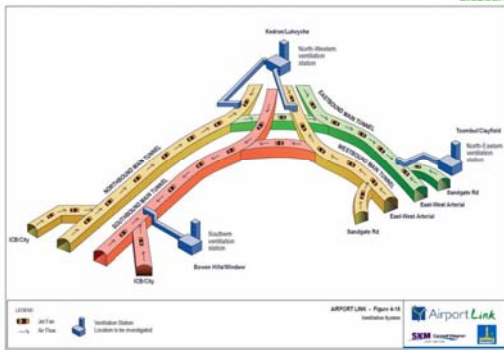
Current Ventilation Design

- The design is based on PBA's concept design using the following inputs:
 - 24 Hour Traffic Mix and Density
 - Dilution Airflow Rates
 - Dispersion (Efflux) Velocity
 - Smoke Extraction Rates
 - Smoke Control (Fire and Smoke Modelling Report)
- PS requirements
 - A net positive inflow of air at all portals while the tunnel is open to traffic
- MEFT determined the plant sizing to meet these requirements



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Tunnel Ventilation System



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Ambient Air Quality Stations

Ventilation Station Location	Site of Associated Monitoring Stations	
	Base Line Station	Permanent Station
Bowen Hills	Northy Street - RCM site#	Northy Street - RCM site# Cartwright Street Bowen Hills#
Kedron	Kedron High School	Kedron High School ALOC
Toombul	Aviation High	Aviation High Vicinity Kalinga Park#

site access to be confirmed



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Kedron Base Line & Permanent Loc. – Kedron State High Permanent Loc. – ALOC



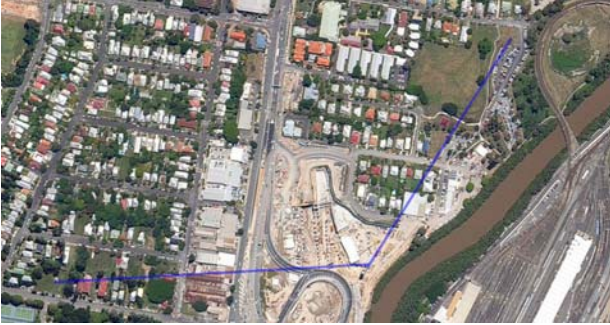
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Toombul Permanent & Base Line Loc. – Aviation High Permanent Loc. – Vicinity Kalinga Park



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Bowen Hills
Permanent & Base Line Loc. – Northey St
Permanent Loc. – Cartwright St Bowen Hills



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Kedron High School Station



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