



MINUTES OF MEETING

Meeting Number 6

CLG	Woolloowin Community Liaison Group				
Location:	Airport Link Information Centre, Lutwyche Centro	Date:	1/06/10	Time:	6.00pm

Chaired By: M Salisbury	Minuted By: D Hockey	Distribution Date: 22 June 2010
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Attendees: Melissa Salisbury (Independent Facilitator), Ron Apelt, Peter Schofield, John Lister, Toby Murdoch
Project Team Members in Attendance: Mario Buterin – TJH, Anthea Craig – TJH, Chris Morris –TJH, David Hake – TJH, Daniel Hockey – TJH, , Deirdre McCue – TJH, Paul Croke – CNI, Lauren Diamond – CNI, Charles MacDonald – BrisConnections
Apologies:
Not Present: Ravi Chopra

Summary
INTRODUCTION
<ul style="list-style-type: none"> • Meeting opened and no apologies were noted. • D Hake was welcomed to meeting and would be presenting about the earth pressure balancing tunnel boring machine
ACTION ITEMS/UPDATE
Inclusion of a Construction schedule with the construction update To be discussed during the Construction Update.
A letter from the Coordinator General sent to all the Airport CLGs defining the term ‘excessive noise’ was tabled. It was noted the term ‘excessive noise’ does not apply to the Woolloowin worksite as the Coordinator General has imposed separate condtions specific to the site.
Representation from Kedron High School School on the CLG TJH confirmed a representative from the Kedron High School P&C is unable to attend the CLG meeting, however the School Principal is interested in attending. The CLG Facilitator has provided the necessary information for the Principal’s consideration of his participation.



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CONSTRUCTION UPDATE

Woolloowin worksite construction activities completed until the end of May include:

- Completion of the acoustic shed and installation of the high level ventilation outlets
- Fitout of the acoustic shed including lighting, ventilation and spoil storage bin
- Completion of the excavation and support of the shaft
- Delivery of first roadheader
- Lowering of roadheader and re-assembly at shaft bottom
- Commencement of tunnel excavation and support
- Installation of jersey barriers and signage identified in the Construction Traffic Management Plan / Construction Traffic Control Plan
- Installation of site office, accommodations and ablutions
- Installation of the water treatment plant

In the coming months, activities at the Woolloowin worksite will include:

- Continue with the tunnel excavation and support works
- Commencement of excavation and support of the caverns east and west from the Rose St access point
- Construction of school crossing at Kedron State High School
- Delivery of second roadheader
- Extension of hours for spoil haulage from the site in line with Conditions of Approval
- Installation of landscaping to site boundary

A Construction Schedule was presented with the key activities for the 29 month period for occupying the site, and divided into three major phases: site establishment, tunnelling and demobilisation.

A CLG member thanked TJH for providing the schedule, however it is not quite what he was after. CLG member would like to understand what challenges construction is facing and how TJH is mitigating these challenges to ensure the use of the Woolloowin Worksite does not extend beyond 29 months.

BrisConnections advised that activities to mitigate against schedule slippage and construction impacts occurs on a daily basis right across the project. Neither BrisConnections or TJH believe that any extension of time for use of the Woolloowin Worksite would be permitted by the Coordinator General.

The Facilitator clarified that the purpose of the CLG is to provide an information sharing forum that allows its members to raise community issues. It is not the purpose of CLG meetings for TJH to report on it's day to day activities.

Q. A CLG member asked if construction of the project from the Woolloowin Worksite is on schedule?

Activities at the Woolloowin Worksite remain on schedule.

The Airport Link project is on program for delivery by mid-2012 however it does not anticipate opening early as the Clem 7 did.

Q. A CLG member asked if works for the the tunnel lining and fitout could be carried out from either Kedron or Toombul to reduce the time the Woolloowin worksite is required?

Some works are planned to be performed utilising the Toombul and Kedron access points. Though, in general,

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drainage, pavement and other works within those drives will preclude access to the caverns for fitout works and so access from the shaft will be required for these works.

TJH will include a map each month demonstrating tunnel progress throughout excavation.

ENVIRONMENT UPDATE

Briefing papers containing environmental monitoring results were provided at the meeting for members to review.

Air Quality

- Dust monitoring results indicate PM10 is within the Coordinator General's goal
- Dust fall out levels are within the Coordinator General's goal
- A real-time gas monitor has been installed at 71 Park Road, Wooloowin to measure carbon monoxide and nitrogen dioxide levels as required in the Coordinator General's *Change Report* (October 2009)
- Results indicate levels of CO and NO2 are within the Coordinator General's goal

Vibration

- Vibration monitoring was undertaken at 71 Park Road and 47 Rose Street during May
- Results for the period indicate vibration levels are within the coordinator General's Goals

Noise

- Noise monitoring results for the month were presented in the briefing papers. Results are also posted to the project website:
<http://www.brisconnections.com.au/Portals/0/docs/Environment%20Monitoring%20Report%20Feb%202010.pdf>

Q. A CLG member raised an issue about a helicopter flying over the site and asked if it was related to CNI?

CNI confirmed that the helicopter was not operating on behalf of CNI.

A CLG member raised a complaint on behalf of Kent Road resident about a humming noise coming from the worksite at approximately 4.00am one morning.

TJH advised that shaft excavation was taking place at that time and that the complaint had been investigated when it was received. It was determined that no specific change in activities had occurred at that time to generate the noise being heard.

TJH conducts noise monitoring at night to assess compliance with the Coordinator General's goals. Noise monitoring at residents property is available.

Q. A CLG member asked what process TJH followed when an exceedance of the noise goals was identified at 73 Park Road, Wooloowin?

TJH advised that it met with the residents to discuss the outcome of the noise monitoring and discussed the activity being undertaken, its expected duration and possible mitigation solutions for the residents consideration.

Q. A CLG member has received correspondence from a Gorman Street resident in relation to noise from the Kedron Brook Building Worksite and asked if it was appropriate to raise the issue at the Wooloowin CLG?



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TJH advised that the eastern side of Gorman Street had been included in the Coordinator General's definition of 'near premises' in the *Change Report* (October 2009) however, that as the source of the disturbance was from the Kedron Precinct it would need to be addressed by the Kedron team.

TJH advised that it would ensure the issue was passed on to the relevant team member to be addressed.

COMMUNITY RELATIONS UPDATE

TJH presented an update of the community complaints and enquiries relating to the Woolloowin worksite since the last meeting.

Community Complaints

- The complaints presented have been broken down to represent complaints from the Woolloowin community and complaints relating to the Woolloowin Worksite
- During the month Woolloowin residents raised issues unrelated to the Woolloowin Worksite including utility services work on Kedron Park Road and truck movements.
- 25 complaints relating to the Woolloowin Worksite were received from 10 residents
- Site noise as a result of rock hammering within the acoustic shed was the predominant cause of complaints
- Five notifications were distributed during May. The area for distribution of notifications has been extended beyond the 'near premises' to include approximately 550 properties.
- The CRT doorknocked residents on 19 May 2010 to discuss the commencement of 24 hour tunnelling at the Woolloowin Worksite and installation of concrete road safety barriers along Rose Street and on 24 May 2010 to discuss works to replace damaged turf on the corner of Rose St and Park Rd.
- Throughout May TJH has received reports from site personnel that rocks, fishing sinkers and broken tiles have been thrown into the Woolloowin Worksite on a number of separate occasions with the potential to cause harm and injury. In response, TJH is working with the Police to investigate and respond to this issue.

Q. A CLG member asked if the person/s throwing objects into the site had been identified using the CCTVs installed near the site gates?

No. The objects are coming from the northern side of the worksite. The CCTVs were installed on the eastern and western sides of the site as a deterrent to vandals and are not operational.

Q. A CLG member raised an issue regarding truck driver behavior and the legality of crossing a white painted median when exiting the site from Kent Road (as witnessed by the CLG member). The CLG member also noted that the truck had cut across him to perform such an act as the member travelled through a green light.

TJH confirmed that it was aware of the complaint the CLG member was referring to and advised that in response to the complaint TJH's Traffic Manager contacted the police to confirm that vehicles were permitted to travel over a painted median when entering and exiting the roadway.

TJH continues to brief its suppliers and contractors about professional driver conduct.

Q. A CLG member raised complaint about trucks working on the Airport Link project parking out the front of property, and wanted to know what restrictions are placed on trucks transporting non-spoil related materials.

TJH advised that the Coordinator General's conditions for the Woolloowin Worksite are quite specific about the route vehicles are to travel when accessing the worksite.

CNI is able to advise the project requirements for the management of vehicles. The Coordinator General's conditions for the rest of the project (excluding the Woolloowin worksite) relate to spoil haulage only.

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ACTION: CNI to provide the CLG member with a copy of the relevant conditions.

Q. A CLG member asked why the roadheader has to be delivered between 12am and 5am?

Due to the size of the delivery TJH has to seek approval from the road authority and Queensland Police Service to transport it on the road. The roadheader equipment is too large to travel during the day.

TJH notifies the community that the work will take place during a broad window to ensure the works can be completed within that time. Deliveries regularly take a much shorter time to complete.

PRESENTATION: Tunnel Boring Machines - Earth Pressure Balance System (EPB)

TJH presented a detailed overview of the Tunnel Boring Machines including a description of how the Earth Pressure Balance System works and why it was selected for this project. Presentation slides will be attached to the minutes.

- An Earth Pressure Balance system is used to ensure that there is no over excavation.
- The Tunnel Boring Machine seals the tunnel as it is excavating with pre-cast segments and grout to avoid water ingress
- The EPB machine has a purpose built Airlock to maintain pressure at the cutting face.
- The machine has a foam injection system containing a biodegradable material which assists the rock and spoil material to pass through the cutter head and onto the conveyor system.
- TJH has a Eagle Farm segment factory producing the interlocking TBM lining panels for the past year. Each panel has a gasket lining to prevent water from permeating the tunnel.
- It is expected tunnelling will progress at approximately 85 metres per week once the machine is in full operation
- There will be approximately four weeks between the launch of the first and second TBMs
- Support equipment for the TBM will be commissioned in June 2010 including the grout plant, chiller plant and water treatment plant.

Q. A CLG member asked what previous experience the TBM Project Manager (Presenter) has in working with Tunnel Boring Machines?

TJH's Project Manager has extensive tunnelling experience after working on TBM projects in UK, Melbourne, Sydney and Hong Kong, covering soft and mixed ground conditions in urban environments.

Q. A CLG member asked if the alignment is parallel or if it spreads out through Melrose Park?

The tunnel alignment through Melrose Park has not changed and remains in the allocated zone. The alignment is spreading to meet the caverns as the large spans need a sufficient central pillar.

Q. A CLG member asked how the grout pressure on the shield of the machine is measured?

The TBM has pressure sensors fitted in the grout lines from the pumps to measure the injection pressure. There are also flow meters linked to the Programmable Logic Controller to record the pressures, flows and volumes of grout injected.

Q. A CLG member asked how many people work on the TBM?

Up to 22 people at a time can work in sections of the TBM in the machine. The personnel crews work along the

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length of the machine. At the front of the machine are the ring builders and operators; road deck builders are in the middle and service handling and conveyor builders are at the back of the machine.

Q. A CLG members asked how the TBM is guided through the ground?

TJH has installed a number of control survey points across the entire project alignment and these are linked by an accurate survey. These control survey points are used to install local survey stations in the launch box. From these known stations, manual survey is taken to the rear of the TBM to coordinate stations for the automatic motorised tracking theodolite to position itself. The motorised theodolite shoots to a laser sensitive target screen on the TBM shield which is also linked to the guidance software. The design alignment is also loaded into the guidance software. The software calculates the position of the TBM based on the updated position of the tracking theodolite, its laser striking the target on the TBM and the attitude of the target on the TBM shield (based on inclinometers in two directions). The software provides an actual and predicted position on a dedicated screen in the operators cabin against the theoretical alignment and the TBM operator adjusts the pressures on the thrust cylinder groups during TBM advance to steer the TBM to the required alignment.

Q. A CLG members asked if the tunnel will have emergency pull in areas for vehicles in case of an accident or breakdown?

The TBM section of Airport Link tunnel will have two lanes with minor shoulders for cars to stop on the side. The tunnel cavern areas will be three lanes where the main line tunnel meets the on and off ramps.

Q. A CLG member asked if the noise being experienced by residents near the Kalinga Park West Worksite will decrease once tunnelling starts?

Tunnelling operations will continue 24 hours per day inside the acoustic shed. While there will still be work associated with tunnelling on the surface the activities will be significantly different to those which took place during construction of the TBM launch box. Residents in the Kalinga Park West Worksite have received communication about the changes to activities in this area. In addition to the operation of the water treatment plant, which is currently operating at this site, there will be a compressor station, water chiller plant for the TBM cooling systems, water tank and grout plant. The grout will be mixed at the surface in Kalinga Park and pumped to the TBM.

A purpose built conveyor will transfer spoil from Kalinga Park to the handling facility on Nudgee Road and from here the spoil will be loaded onto trucks.

Q. A CLG members asked what the teeth of the cutterhead made of?

The cutter rings are made of a high grade tool steel such as a material called H13. Components such as rings and bearings are generally made in the United States under patent. The soft ground tools are normal steel with tungsten inserts for wear resistance.

Q. A CLG member asked what happens when an aquifer is required to be tunnelled through?

The EPB machines have been specifically chosen for the purpose of excavating through the project alignment's ground conditions. The accelerated grout process will minimise impact on underground aquifers. The combination of a sealed TBM system, gasketed lining and annulus grouting will minimise impact to the groundwater regime.

Q. A CLG member asked why the TBM construction methodology is used as opposed to roadheaders?

The TBMs chosen are designed to suit the ground conditions which are predominantly clays and siltstones through the Kalinga Park to Woolloowin section of the project alignment. For this project, the soft and mixed

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ground conditions at the start of the tunnels at Kalinga Park required an earth pressure balance TBM. Road headers are suited for harder ground conditions, however not too hard as they are limited in true hard rock.

Q. A CLG member asked how the cross passages are excavated between the TBM tunnels?

TJH advised that steel plates are installed at locations where cross passages are to be excavated. The steel plates are removed after the temporary steel propping has been installed and the grouting and pre-support has been installed so that the cross passages can be excavated. It is expected that a small excavator will be used for this work from Kalinga Park to Kedron to excavate these cross passages.

Q. A CLG member asked where the service cables are located within the tunnel?

Permanent electrical services and communications cables would be located below the road deck in the finished tunnel. The ventilation fans are installed from the underside of the smoke duct slab which forms a void at the top of the tunnel for extraction of smoke in the event of a fire emergency.

Q. A CLG member asked what will be done with the TBMs once tunnelling is completed?

At this stage, TJH intends to bury the front of the TBMs in the ground and to remove the back part of the machines via the completed tunnels and also back to Kalinga Park.

GENERAL BUSINESS

Q. A CLG member asked CNI if there are any further property resumptions required to complete construction of the project.

CNI has a dedicated Property Team who oversee and manage the property resumption process.

ACTION: CNI to confirm if further property resumptions are required for the project

Q. A CLG member advised that the community does not understand why the barriers have been placed between the footpath and noise barrier? The community is concerned about pedestrian safety.

Installation is to ensure compliance with the Construction Traffic Management Plan (CTMP) approved by the Department of Transport and Main Roads and Brisbane City Council. The CTMP was subject to a road safety audit which identified the requirement for barriers in accordance with the *Road Planning and Design Manual*. TJH will not install additional barriers between the kerb and footpath. This option was originally considered however was not possible due to the location of services pits

The facilitator noted that the discussion about barrier installation and placement was closed at the May 2010 CLG meeting.

A CLG member requested CNI provide a written response to an email sent to the Department of Infrastructure and Planning (DIP) regarding pedestrian safety on Rose Street and additional barriers on the street.

Post-meeting note: This request was made to DIP independent of the CLG process and will be addressed separately to the Community Liaison Group.

Q. A CLG member asked when are the trees and landscaping going in on Rose Street.

TJH is still progressing the required road authority approvals.



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Urban Mitigation and Community Development Process

- CNI will issue a newsletter in the coming weeks to the wider Woolloowin community seeking feedback on options for reinstatement of the Woolloowin Worksite and enhancing other areas such as additional footpaths, bikeways, and improvements to Eagle Junction Station (as per the Coordinator General's conditions).
- The newsletter will be distributed to the same areas as the Request for Project Change newsletter, which is a wider distribution than 'near premises'.
- At the end of the consultation period CNI will collate responses and go to Urban Designers to produce three options to be provided to the community for feedback. The designers will also present the three options to the Woolloowin CLG.
- The ideas will be coming from the community but will need to meet the guidelines set by BCC and DTMR. CNI has met with DTMR and BCC already to discuss the process.

Q. What are the other forums for talking to community?

CNI will hold an information day for the community once options are presented.

Next meeting: Tuesday, 6 July 2010, 5:45pm for 6pm

Meetings for the rest of the year

- 3 August 2010
- 7 September 2010
- 5 October 2010
- 2 November 2010
- 1 December 2010


airportlink
northernbusway
airport roundabout upgrade

 

Construction Update

Mario Buterin, Project Manager

smarter ways to move







EPB SHIELD

S-512/514 Airport Link Brisbane Australia	
2 EPB-Shields	
Diameter:	12.450 mm
Power:	4900 kW
Tunnel length: 2 x 2.422 m	
Geology:	Rock, Sandstone, Siltstone, Tuff
Contractor:	Thiess John Holland Joint Venture

SCREW CONVEYOR

- Power: 800 kW
- Diameter: 1.250 mm
- Max. Speed: 24,3rpm
- Static pressure: 3,5 bar

AIR LOCK SYSTEM.

- Man lock with Pre-/Mainchamber
- Persons in Pre-/Mainchamber: 2 / 4
- Oxygen breathing system

Tunnel lining

- 9 segments + key
- 11.34m id, 400mm thick
- Full gasket seal installed

TJH-GL-FRM-CY-0003-0-00

CLG Update - TBM

David Hake

smarter ways to move

