

# community update



## 2010 – A year of project milestones

# Australia's largest infrastructure project more than 50% complete

In July 2010, the Thiers John Holland project team celebrated a significant milestone by reaching the half-way point of the projects' construction program. With 6km of tunnelling completed and more than 10 million hours worked to date, the project is on schedule for completion in mid-2012.

The project has also surpassed its expected peak employment by an additional 800 workers, bringing the jobs total to more than 3,400.

This has been the busiest year to date for the project team with a series of memorable milestones achieved so far this year, including:

Opening of the new Gateway Motorway overpass	April
Start of roadheader tunnelling from Woollooin worksite	May
Start of construction of the fast diamond intersection to replace the Airport Roundabout	June
First breakthrough in the northbound tunnel between Bowen Hills and Truro Street	June
Kedron Park Road upgrade completed	July
10 out of 12 Airport Link bridges under construction at Bowen Hills	July
Launch of the project's two Tunnel Boring Machines from Kalinga Park	July & August
Airport Flyover bridge structure completed with the installation of the final concrete segment	August



### Still to come in late 2010

- » Staged opening of the new Airport Flyover to traffic
- » Opening of the Airport Roundabout fast diamond intersection to traffic
- » Start of Stafford Road upgrade
- » First roadheader breakthrough in the Northern Busway tunnel between Truro and Chalk Streets
- » Breakthrough in the southbound tunnel between Bowen Hills and Truro Street
- » Installation of the temporary roundabout at Sandgate Road, Toombul

## Services relocation work 70% complete



Services relocation work across the entire project is 70% complete. Remaining work will occur throughout the rest of this year and into 2011 and will be focused on the relocation of:

- Gas, telecommunications & electricity (75% of total work remaining)
  - Sewer and water (25% of the total work remaining).
- We will continue to keep residents living in and around the project's alignment, informed with detailed notifications about the type, location and potential impacts of remaining work occurring in each area.



SEPTEMBER 2010



# TBM naming competition winners

The lucky winners of the TBM naming competition were six year old Emile Bragard and his four year old sister Lila who named the machines "Rocky" and "Sandy". Their entry was one of 223 entries received during the seven week competition.

The brother and sister, whose father is an Airport Link tunnelling engineer, came up with the names after hearing their dad talk about the varied ground conditions, including sand and rock, the machines will tunnel through.



# Airport Link

## Tunnelling

In July and August, the project celebrated the start of tunnelling from Toombul with the launch of the project's two Tunnel Boring Machines (TBMs), purpose built to carve out Brisbane's Airport Link tunnel. The giant 3,600 tonne machines, the largest to ever operate in Australia, will travel up to 85m each week excavating the 2.5km eastbound tunnel, between Toombul and Lutwyche.

The launch of the first TBM included the blessing of the patron saint of tunnelling, Saint Barbara. A statue of St Barbara was placed near the entrance of the Airport Link tunnel to provide good luck and safety to the workers throughout the twelve month excavation of the TBM tunnels.

With TBM tunnelling now in full swing, the project's 1.8km overland conveyor system is also operational. Transporting up to 2,600 tonnes of rock and soil per hour, the conveyor is partially covered to minimise dust and will run 24/7 from Kalinga Park to the project's spoil handling facility on Nudgee Road.

Roadheader tunnelling is progressing at a rapid rate at Bowen Hills, Lutwyche, Kedron and Woolloowin with 17 roadheader machines now operating to carve out the Airport Link and Northern Busway tunnels, the most for any Australian construction project. With 5.5 kilometres of tunnel excavated to date the focus is gradually shifting to the installation of the permanent concrete lining for the tunnel, the permanent road base and mechanical and electrical fit-out.

To construct the permanent concrete lining for the roadheader tunnels, the Airport Link project is using innovative 'variable arch form lining' machines. The arch form machines are the first of their kind in the world specially designed to be able to cope with the varied dimensions and configurations of the Airport Link tunnelling network.

Through the use of hydraulics and a series of steel segments the arch form can transform from a three lane, 17 metre diameter, 350 tonne machine to a cavern lining four lane, 30 metre diameter 500 tonne machine.

## Surface Work

Work above ground is also ongoing at Bowen Hills, Kedron and Toombul to construct the on and off ramps that will connect the Airport Link tunnel with the existing road network.

At Bowen Hills, a total of twelve bridges will be constructed to connect the Airport Link tunnel with the Clem 7, the Inner City Bypass, Bowen Bridge Road and Campbell Street. Current bridge work involves the installation of 50 tonne bridge beams over Bowen Bridge Road. This work is generally undertaken at night due to lane closures required along the ICB and Bowen Bridge Road.

Also at Bowen Hills, excavation is underway for the cut-and-cover Lutwyche Road tunnel off-ramp located between Newmarket Road and Northey Street. When complete, this off-ramp will take motorists out of the Airport link tunnel southbound onto Lutwyche Road.

In the Kedron precinct, cut-and-cover excavation is underway at four key worksites to construct the Airport Link on/off ramps including the intersection of Stafford and Gympie Roads; Lutwyche Road adjacent to Perry Street; between the Kedron Park Hotel and St Andrew's church; and Park Terrace. Work to widen Stafford Road to accommodate the entry into the Airport Link tunnel, the Airport Link off-ramp and east and westbound lanes of Stafford Road will continue until early 2011.

At the Stafford Road site in Kedron, construction of the Airport Link Operations Centre (ALOC) is progressing well with foundations and piles poured. Work is now underway on the internal stair wells and elevator shafts. Once complete, the ALOC building will provide 24-hour surveillance and safe operation of the Airport Link toll road when it opens in 2012.

At Toombul, excavation of the cut-and-cover structures to form the Airport Link tunnel portals in Kalinga Park are well underway. Construction of the sub-station is also progressing well. Upon completion, the sub-station will power the Airport Link ventilation station.

## Ventilation Station update

The Airport Link project will incorporate a longitudinal ventilation system which will draw in large volumes of fresh air into each tunnel at the portals. The air will then be pushed along by fans and vehicle movements for collection and high level dispersion through three Ventilation Station Outlets (VSOs) located along the project alignment at Bowen Hills, Kedron and Toombul.

At Bowen Hills, construction of the VSO is ongoing 24 hours a day, six days a week at the Federation Street site. Current construction activities include construction of internal walls, columns and floors; and installation of roof beams, concrete decks, drainage and conduit trenches. Once complete, the outlet will stand approximately 30 metres high and will be partially buried allowing for construction of a land bridge and enhanced pedestrian and cyclist connectivity.

Construction of the Kedron VSO is progressing well behind the Kedron Brook Building on Gympie Road. With foundation work completed, the focus is now on construction of the 20 metre tall ventilation station structure which includes the construction of external walls, positioning of the internal vertical columns to support the internal walls and the construction of the concrete floor slabs. Construction of the "plenum" structure is also underway, which is a vital piece of infrastructure related to tunnel ventilation. The plenum is a significant feeder of air into the Kedron VSO.

At Toombul, construction of the VSO is well underway in Kalinga Park on the western side of Sandgate Road, with excavation occurring 24 hours a day five days a week underneath the roof slab. When complete, the ventilation station will be buried to create a land bridge providing walkway, cycleway and parkland connections for the community. Only the slimline outlet will be visible, standing 25 metres high.

## Temporary roundabout on Sandgate Road

Motorists will continue to see changes along East West Arterial Road and Sandgate Road during the coming months as work to create a temporary signalised roundabout at the East West Arterial Road and Sandgate Road intersection is completed. This roundabout will be operational by the end of the year following service relocations, pavement construction and bridge widening west of Sandgate Road.

Extensive assessment and analysis of the roundabout design and function has been undertaken and indicates that traffic travelling through this intersection will not be delayed while work to construct the new Airport Link overpass at Sandgate Road is completed. Some of the work carried out to implement these traffic changes require lane closures and therefore must be done at night, as special circumstances work, to minimise disruption to traffic.

For more information about upcoming traffic changes during work on the Airport Link, Northern Busway (Windsor to Kedron) and Airport Roundabout Upgrade Projects sign up to receive email notifications and SMS traffic alerts at [brisconnections.com.au](http://brisconnections.com.au).



# Airport Roundabout Upgrade

Construction is progressing rapidly at the Airport Roundabout with demolition of the old Gateway Motorway overpass completed and traffic now travelling on the new four-lane overpass.

Installation of all 436 concrete bridge segments required for the 21m tall Airport Flyover was completed in August. Remaining work includes the installation of barriers, lighting, asphalt and line marking.

The 750m bridge will link East West Arterial Road directly to Airport Drive, bypassing Nudgee Road the Airport Roundabout and the Gateway Motorway overpass.

Construction of the signalised 'fast diamond' intersection that will ultimately replace the roundabout is well underway. Activities that will occur over the coming months include installation of barriers, lighting, traffic signals, Intelligent Transport System infrastructure, asphalt and line marking.

Realignment of East West Arterial Road, between the Nudgee Road intersection and the Airport Roundabout, will continue throughout September. This work involves some traffic switches which will take place at night under traffic and police controls.

As part of this work, TJH will finalise construction of the Nudgee Road intersection. With work occurring so close to Airport Drive,



## Construction milestones

### Airport Roundabout Upgrade

- New four-lane Gateway Motorway overpass **COMPLETE**
- 21m tall Airport Flyover **OPENING FROM OCTOBER 2010**
- Fast diamond intersection **OPENING FROM OCTOBER 2010**

the Gateway Motorway, East West Arterial Road and Nudgee Road, extensive lane closures and detours are required during off-peak times to maintain safe clearance zones for traffic throughout construction.

For further details on traffic changes in the Airport Roundabout precinct visit [brisconnections.com.au](http://brisconnections.com.au) or call us on 1800 721 783 (freecall).



### When the Airport Flyover opens progressively from October 2010...

- Access to DFO will be via East West Arterial Road and the fast diamond intersection (not the Airport Flyover)
- Pedestrians and cyclists will not be permitted on the Airport Flyover – pedestrian and cycle access to and from Airport Drive will be via the fast diamond intersection
- Access to the Nudgee Road intersection will be via East West Arterial Road and the fast diamond (not the Airport Flyover)

For more information on how the Airport Flyover and fast diamond intersection will operate, visit [www.brisconnections.com.au](http://www.brisconnections.com.au) or call 1800 721 83.

# Constructing the Northern Busway

The 3km Northern Busway will be a two lane, two-way road for buses only, connecting the Royal Brisbane Hospital at Windsor, to Kedron via the Lutwyche Road corridor.

Construction of the 1.5km underground section of busway is well underway and incorporates a combination of driven tunnelling and cut and cover construction techniques. Two roadheaders have excavated more than 50% of the 490m section of busway driven tunnel and all four of the cut-and-cover structures are now under construction with two almost fully excavated.

In Bowen Hills construction of the Northern Busway bridge is moving along with 30 out of a total 48 bridge beams now installed. The formation of the bridge is becoming clearer as it makes its way across Bowen Bridge Road to feed into a new bus stop at Federation Street.

Steady progress is being made in Kedron with piling work continuing at Brookfield Road and Perry Street to construct the cut and cover structures in this area. Cut and cover construction is often used to construct underground structures in busy urban areas, where open excavation would cause a significant disruption to traffic.



## Traffic changes

To enable construction of the Northern Busway some traffic changes including temporary road closures are required. Norman Avenue has been temporarily closed at Lutwyche Road until early 2011. Northern Busway tunnel work also requires the temporary closure of Somerset Road until early 2011. Homebush Road is expected to re-open later this year.

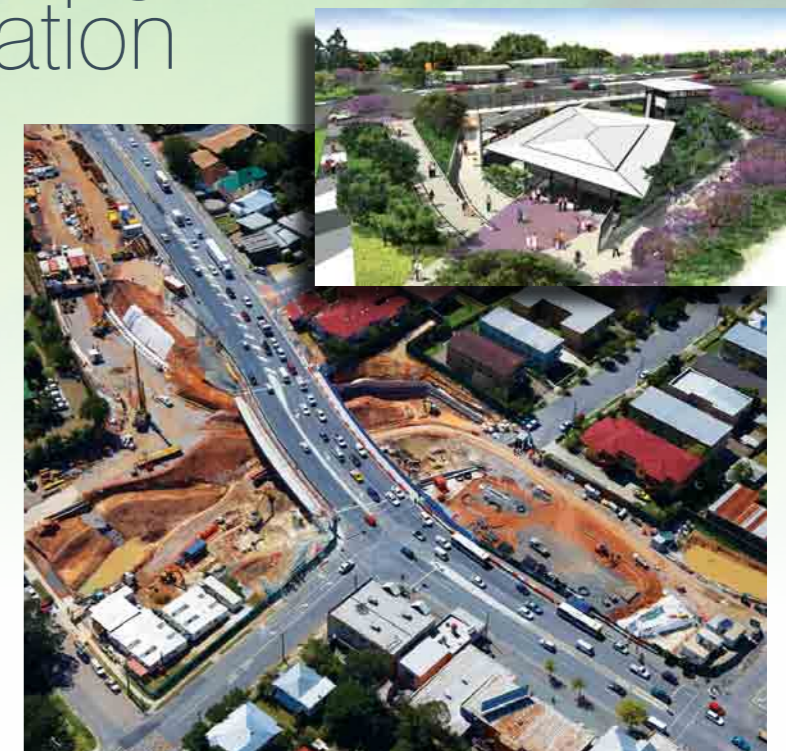
# Lutwyche Road bridge to create vibrant busway station

After 18 months of construction, a section of Lutwyche Road has been transformed into a bridge enabling further construction on the state-of-the-art Lutwyche Busway station.

Construction of the Lutwyche Road bridge differed from traditional bridge construction with a 'top down' construction methodology – the reverse approach to usual operations to allow traffic to keep moving.

This involved building the reinforced bridge deck first, before excavating underneath and turning the section of road into a bridge. Three staged road diversions were successfully implemented on Lutwyche Road to switch traffic to the east and then west, enabling construction of the bridge deck with minimal disruption to traffic.

Once complete, the Lutwyche Busway station will connect both sides of Lutwyche Road, creating new green space that will connect Bradshaw Park with Kedron Brook. The station features open-air plaza design with an underpass enabling pedestrians and cyclists safe, easy access to the Busway from both sides of Lutwyche Road without having to cross the busy surface road.



# In the Community

During 2010, Thiess John Holland has been active in the community holding coffee mornings in local streets, information sessions about particular construction activities and worksites, attending numerous local community events and school fetes and giving project presentations to a variety of community groups and associations.

**Wooloowin worksite open to the public** – In April and September 2010 information sessions were held for the Wooloowin worksite which provided local community members with an opportunity to see how the site operates behind the noise barrier and inside the acoustic shed.

**Airport Link Community Open Day** – On 18 July 2010, a very successful community open day was held at the Toombul worksite. 2,000 free tickets were released to the public and attendees were treated to site tours of the worksite to glimpse the massive Tunnel Boring Machines being assembled, and enjoy entertainment, kids rides, showbags and a free sausage sizzle.

Throughout the remainder of 2010, Thiess John Holland will continue to host regular community events to keep local residents, community groups and the wider public informed about progress on the Airport Link, Northern Busway (Windsor to Kedron) and Airport Roundabout Upgrade projects.

*If you would like to find out about upcoming information sessions or would like a project team member to present to your community group, please contact us on **1800 721 783** or [contactus@tjh.com.au](mailto:contactus@tjh.com.au).*



## Community Fast Facts

### In 2010...

- More than 350 doorknocking sessions undertaken
- More than 90 community gatherings held including coffee mornings, site tours, information sessions, presentations, Community Liaison Group meetings and displays

### Since the project started...

- 560,000 notifications distributed
- Almost 10,000 visitors to the Information Centre

## Visitor Information Centre upgrade

The project's Visitor Information Centre, is currently undergoing a significant upgrade with the installation of new display areas, including a detailed tunnelling display, updated precinct information, videos and computer kiosks. Drop in and check out the new and improved centre located at Centro Lutwyche Shopping Centre on Lutwyche Road (open Wednesdays to Saturdays).



## keep in touch

For more information contact us:

**24 Hour Community Hotline**  
**1800 721 783**

**Email:** [contactus@tjh.com.au](mailto:contactus@tjh.com.au)

**Web:** [www.brisconnections.com.au](http://www.brisconnections.com.au)

**Mail:** PO Box 3548, South Brisbane BC QLD 4101

**Visitor Information Centre:** Centro Lutwyche, Lutwyche Rd, Lutwyche QLD

