



# community update

November 2009



## CELEBRATING ONE YEAR OF CONSTRUCTION

**Minister for Infrastructure and Planning Stirling Hinchliffe has congratulated the Thiess John Holland team who this month celebrated the project's first anniversary, marking one year since the official start to construction.**

Today, a team of more than 2,000 people are working to build the massive Airport Link, Northern Busway (Windsor to Kedron) and Airport Roundabout Upgrade projects in Brisbane's north, clocking up 4.5 million work hours.

In November 2008, Premier Anna Bligh together with Minister Hinchliffe signalled the start to construction from the Kedron Brook Building site adjacent to Gympie Road, now a 27 metre deep tunnel portal.

The tunnel portal will ultimately form the southbound (to city) and eastbound (to Toombul and the Airport) on-ramps to Airport Link in Kedron.

"In 2012 the Airport Link tunnel will allow fast travel between Brisbane's CBD and the Airport, avoiding 18 sets of traffic lights and saving up to 17 minutes between the city and Toombul during peak hours," said Minister Hinchliffe.

Project Director Gordon Ralph said one of the challenges for the project has been the extensive public utilities work throughout north Brisbane.

**"The project has so far relocated 6 kms of electrical cables, 18 kms of telecommunication lines, 10 kms of gas pipelines and almost 2 kms of water lines," Mr Ralph said.**

"The relocation and installation of new services can be disruptive in local streets, and we thank the community for their patience. We expect to complete this work across all precincts by late 2010."

At the surface, 25 piling and drill rigs and 26 cranes are currently operating at Airport Link work sites.

Underground, ten roadheader machines are tunnelling 24 hours a day to excavate the Airport Link and Northern Busway tunnels.

**While significant progress has been made on the project's design and construction, Thiess John Holland is focused on completing foundation works as soon as possible, to minimise impacts on local communities.**



### ONE YEAR ON...

- \$1.25 billion spent on construction
- 30% of the projects complete
- 1.2 kilometres of tunnel excavated
- 22 bridge piers erected
- 4,440 piles installed
- 6,300 visitors to the Airport Link Information Centre
- 18,900 tonnes of asphalt laid
- 184,000 community notices distributed
- More than 300 native animals rescued and relocated to new homes

Visit the Gallery page of our website to view photos and videos of Airport Link tunnelling and construction progress [www.brisconnections.com.au](http://www.brisconnections.com.au)



# KEEPING ACCESS OPEN... AS ROADS CHANGE IN KEDRON

To maintain safe access throughout construction in the Kedron precinct of Airport Link and Northern Busway, changes to the traffic, pedestrian and bus stop network will occur, including changes to the alignment of Lutwyche and Gympie Roads.

Southbound traffic lanes on Lutwyche Road will be diverted west between Kedron Park Road and Bradshaw Street for cut and cover construction of the Northern Busway and Airport Link tunnel portals. It will also allow for a section of Lutwyche Road to be transformed into a bridge to carry traffic above the new Lutwyche Busway Station.

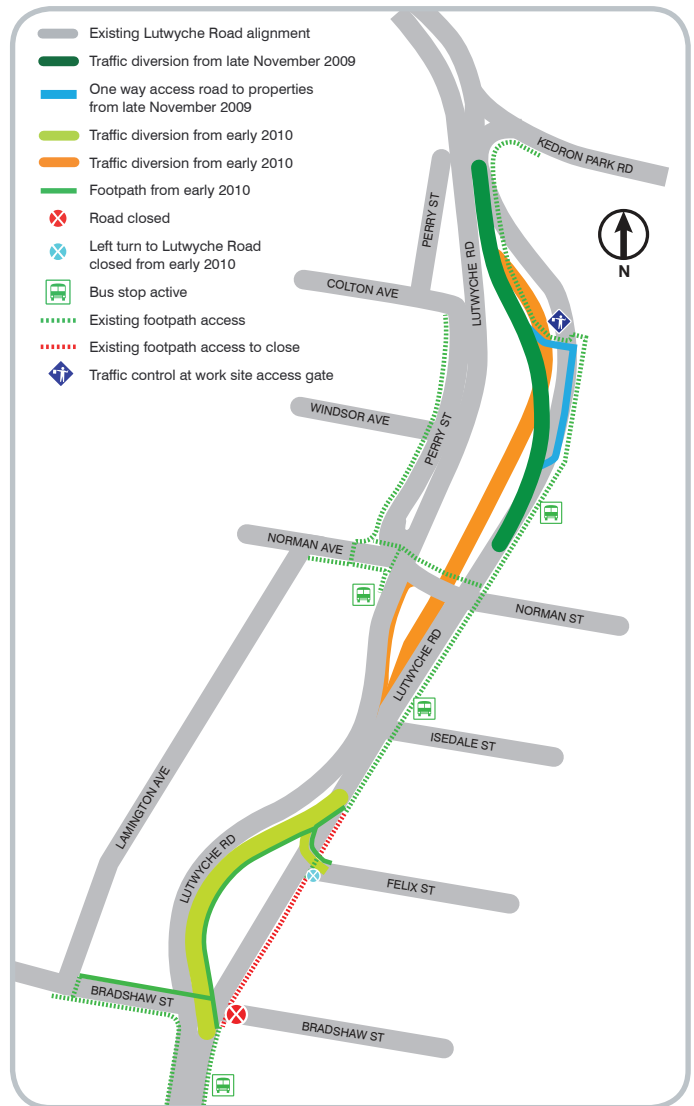
The diversion of Lutwyche Road and subsequent footpath changes are being implemented in three stages – refer to the map opposite.

In Kedron north, preparation is underway to allow for construction of the cut and cover busway tunnel. Subject to road authority approval, Gympie Road will be diverted east between Leckie Road and Somerset Road, and Somerset Road and Broughton Road will close at Gympie Road until late 2010.

Throughout construction, signage will remain in place to direct customers to access businesses including Mum's Bakehouse and Solver Paints Decorator Centre located at the corner of Gympie and Broughton Roads.

Thiess John Holland continues to work with the relevant traffic authorities to coordinate the approval of all changed traffic conditions.

Please feel free to contact our 24-hour Community Hotline for further information about these works, or visit the project website to register for SMS project traffic alerts.



Above: traffic diversions for Kedron South and Lutwyche

## IN THE COMMUNITY...WORKING WITH SCHOOLS

During August-September, Years 4-7 students from Wooloowin State School joined the Airport Link's Environment Team for lessons in water monitoring. Students visited the Kedron Brook and learnt to use high-tech equipment to read levels of water acidity and alkalinity, as well as temperature and turbidity upstream and downstream of the construction sites, adjacent to the Brook. The creek activities were a fun, interesting learning experience and the students look forward to compiling their findings.



Following a staff fundraising raffle, the Airport Link project's community team presented a cheque to members of the 'Kedron Tigers' AFL team from Kedron State High School for the purchase of new team jerseys. Our congratulations to the all-girls junior team who achieved great results in the last season, winning the Jonathon Brown Cup inter-school competition.



# TUNNELLING HITS 1KM MILESTONE

This month marks a tunnelling milestone as Thies John Holland completed the first kilometre of tunnel excavation for Airport Link and Northern Busway.

Airport Link's twin 5.1 kilometre tunnels are being constructed jointly with the second stage of the Northern Busway (Windsor to Kedron). Together the projects require a total of 15 kilometres of tunnelling, encompassing road and busway tunnels and connecting ramps.

When complete, Airport Link will be the longest road tunnel in Australia.

**Twenty-four hour tunnelling operations are underway with a total of ten roadheader machines now excavating beneath Brisbane's busy inner city and northern suburbs, carving out the northbound and southbound Airport Link tunnels (refer to map).**

A total of 16 roadheaders will undertake the majority of the project's tunnelling work – the largest number of roadheaders to be used on an Australian infrastructure project.

Roadheader tunnelling for the Northern Busway will soon commence near Windsor's Pop's Fig, a local landmark that will mark the entrance to the busway tunnel at Truro Street.

The roadheaders' rotating cutting heads, featuring up to 72 tungsten-tipped picks, can effectively excavate tunnels and ramps of varying shapes and sizes.

**Each machine is equipped with a computerised sensor system to safely and accurately guide its journey through Bowen Hills, Windsor-Lutwyche and Kedron.**

As Queensland's, and one of Australia's, most complex engineering feats – constructing 15 kilometres of tunnels, more than seven kilometres of new road and 25 bridges within Brisbane's densely populated northern suburbs – the Airport Link project has no shortage of challenges.

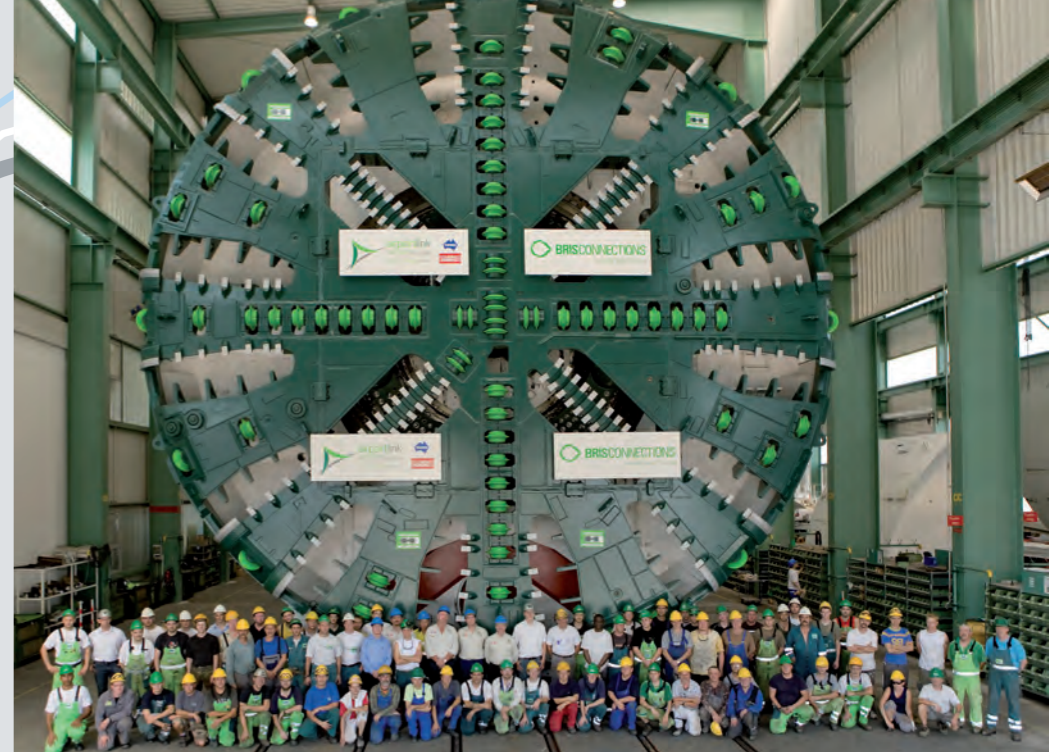
While the Airport Link team is proud of its achievements to date, there is still large-scale construction to complete prior to the assembly and operation of the Tunnel Boring Machines in early 2010.

**For many local residents, 2010 will bring a 'light at the end of the tunnel' as a large portion of the project's more intrusive and noisy work, including piling and services relocation, will be complete over the next twelve months.**

In less than three years, the Airport Link tunnel will enable fast travel from the northern suburbs to the city and airport precincts, addressing serious traffic issues in the Brisbane metropolitan area, where growth in peak-hour traffic and travel time is currently the highest of any Australian capital city.

## AIRPORT LINK TUNNELLING

- 8.7 kilometres by Roadheaders
- 4 kilometres by Tunnel Boring Machines
- 2.3 kilometres by Cut and Cover construction



# AUSTRALIA'S LARGEST TUNNEL BORING MACHINE – PREPARES FOR SHIPMENT TO AUSTRALIA

The first of two giant Tunnel Boring Machines (TBMs), purpose-built for Airport Link, has passed its factory testing in Germany and is now en-route to Australian shores. The TBM, featuring a cutterhead capable of excavating 12.48 metres in diameter, will be the largest to ever operate in Australia and will be delivered in three shipments of container and break-bulk cargo.

Works to assemble the 3,600 tonne machine will commence in January prior to operation in May 2010.

The project's second TBM, an identical twin, was factory tested and approved in October and is expected to arrive in March 2010 for assembly and tunnelling two months after the first machine.

The team from German company Herrenknecht, world leader in tunnelling technology, spent nearly twelve months building the two tunnel boring machines which will be lowered into the ground at Kalinga Park to excavate Airport Link's mainline tunnels. The machines are expected to encounter soft ground conditions with a mix of weak rock, sand, gravels and clays for which the 'Earth Pressure Balance' model of Tunnel Boring Machine is specially-designed.

## DID YOU KNOW?

- Each TBM needs a team of around 22 people to operate the machine – a driver, service handlers, ring builders, mechanical fitters and electricians, road deck builders, grouters, a Foreman, Shift Boss and a Shift Engineer
- Each TBM is 195m long, a little longer than the Suncorp Stadium playing field
- The TBMs will generally travel 25m – 30m below the surface
- TBM parts will be lowered into the ground for assembly through a giant launch box in Kalinga Park measuring 106m long x 35m wide x 20m deep
- The machines will be extracted at Chalk Street, Lutwyche on completion
- Excavated spoil (rock and soil) will be transferred by a conveyor from the tunnel to a handling station 2km from the launch box.



# SUPER T'S INSTALLED FOR AIRPORT ROUNDABOUT UPGRADE

**The first of 50 Super T bridge beams, each weighing 80 tonnes, have been installed for the new 180 metre Gateway Motorway overpass as part of the Airport Roundabout Upgrade Project.**

The Super Ts, measuring 36 metres in length, were delivered at night under police escort and lifted into place by a 280 tonne crawler crane.

The giant T-shaped concrete beams were manufactured at the project's Precast Facility in Bald Hills, and are being installed in stages with completion expected prior to Christmas.

During installation, motorists can expect short-term lane closures and detours of the Airport Roundabout and Gateway Motorway.

**The Super Ts will form the five bridge spans of the new Gateway overpass, and once complete, traffic will be moved onto the new bridge and the existing Gateway overpass will be demolished.**

Foundation works are also progressing for the 750 metre east-west flyover bridge – an important feature of the Airport Roundabout Upgrade.

The four-lane flyover – to stand 21 metres tall – will require the installation of 250 piles driven to a depth of 30 metres underground to ensure a strong founding support.

Following piling and associated ground improvement works, 12 bridge piers will be constructed in preparation for the installation of 436 massive concrete box girders (box-shaped bridge beams) that will support the flyover bridge.

Installation of the 10 metre wide x 3 metre tall box girders, weighing up to 50 tonnes each, is scheduled to begin in February next year.

During 2010, it will be 'eyes to the sky' as a series of significant concrete pours will be carried out for construction of the roadways; most importantly the Airport Roundabout Upgrade's feature flyover.

The two overpass bridges together with a new 'fast diamond' intersection will replace the existing Airport Roundabout, one of South-East Queensland's most congested intersections, and significantly improve travel time to and from the airport precinct.

## BUSINESS GROUP FORMED

A Business Reference Group has now been formed to keep industrial and commercial business owners up-to-date with progress on the Airport Roundabout Upgrade project. Meetings are held bi-monthly and provide a great opportunity for businesses to meet regularly with the project team, to ensure minimal disruption to business operations during construction.

*Meeting Minutes can be viewed on the ARU Construction page of the project website.*

## TRAFFIC CHANGES – WHAT TO EXPECT

Changes to the traffic network will be required during construction of the Airport Roundabout Upgrade. In addition to short-term lane closures, other changes will include road realignments (minor adjustments to the travel path of vehicles) and traffic switches (significant changes that redirect traffic to a new road, bridge or intersection).

Road realignments and traffic switches will occur on the East West Arterial Road, Nudgee Road, Airport Drive and Gateway Motorway, including the on and off ramps.

## TRAFFIC SWITCHES IN 2010

<b>Early to mid 2010</b>	Gateway Motorway switched to new Gateway Bridge
	Gateway Motorway on / off ramps switched onto temporary ramps
	East West Arterial / Nudgee Road intersection switched to final traffic arrangement
<b>Late 2010 – Early 2011</b>	Flyover bridge opens to traffic
	Airport Roundabout switched to new fast diamond intersection
<b>Early 2011</b>	Gateway Motorway on/off ramps switched to final alignment

Thiess John Holland will keep motorists advised of all traffic switches through newspaper and radio advertising, SMS and electronic message boards. Signage and traffic management will also be in place to direct motorists.

Register for SMS traffic alerts [www.brisconnections.com.au](http://www.brisconnections.com.au)



# NEW WOOLLOOWIN WORKSITE APPROVED

On 12 October Queensland's Coordinator General approved a new Woolloowin Worksite to be used for construction of the Airport Link Project, ensuring the project's program is secure and months of additional community and congestion impacts for Brisbane's northside are avoided.

**Approval to establish and operate the new construction site is subject to conditions set by the Coordinator-General, ensuring impacts on Woolloowin residents and businesses are minimised.**

The new worksite, situated on vacant land bound by Rose Street, Park Road and Kent Road in Woolloowin, was owned by the Department of Transport and Main Roads and set aside for future road upgrade.

The Airport Link team requested this project change after extensive analysis confirmed adverse underground conditions in the Kedron area had the potential to slow the delivery of the project, as extensive construction activity is needed than originally planned.

**Establishment of the new Woolloowin Worksite will enable a temporary tunnel access shaft to be built, where additional roadheader machines will be launched to excavate a passage linking the mainline Airport Link tunnels.**

The passage will be constructed prior to Airport Link's two tunnel boring machines passing through in 2010, as they excavate west from Kalinga Park to Chalk Street in Lutwyche.

Project Director Gordon Ralph said the approved change has meant local communities living along the project corridor, between Toombul and Lutwyche, will not endure the prolonged impacts of additional construction activity.

"Establishment of the Woolloowin Worksite is now underway and we aim to have this completed as quickly as possible in order to commence tunnel excavation, which will mean reduced disruption at surface level," said Mr Ralph.



*The vacant property where the new Woolloowin Worksite is established*

The Woolloowin site is only temporary and on project completion in 2012 will be reinstated and handed over to the local community, for use as a park or other recreational facility following consultation with residents.

**For further information about the Woolloowin Worksite and request for project change, visit the Construction/Woolloowin page at [www.brisconnections.com.au](http://www.brisconnections.com.au)**

Expressions of interest were sought to form a new **Woolloowin Community Liaison Group (CLG)**, functioning alongside existing project CLG's. The CLG's communicate issues, ideas and opportunities to the project team and the State during construction.

*CLG meeting minutes can be viewed on the project website.*

## SITES CLOSE FOR CHRISTMAS

All work sites for Airport Link, Northern Busway (Windsor to Kedron) and Airport Roundabout Upgrade will close over the Christmas period from 24 December, 2009 – 4 January, 2010.

Our Visitor Information Centre will also close during this time, re-opening on Wednesday 6 January.

*We wish all local communities a safe and happy Christmas.*

## 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

