

MEDIA RELEASE

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Giant launch box near complete for Australia's largest tunnelling machine

Construction of a 22 metre-deep launch box at Kalinga Park in Brisbane's north is almost complete, ready for the first of Australia's largest Tunnel Boring Machines (TBMs) to start excavating the Airport Link tunnel.

Two TBMs, with cutterhead discs of 12.48 metres in diameter, will be launched from the Kalinga Park work site to carve out the mainline Airport Link tunnel – the longest road tunnel in Australia.

Thiess John Holland, constructor of the Airport Link Project, has a 300-strong team working rotational shifts 24 hours/7 days to prepare for the launch of the first TBM in coming months.

The giant launch box measuring 105 metres long x 35 metres wide – a size that could fit 300 double-decker buses – is now 90% complete.

Project Director Gordon Ralph said extensive site establishment work and complex construction required for the TBM launch box is an Australian first.

"The significant size of the launch box has required 75,000 of a total 85,000 cubic metres of spoil to be excavated to date," said Mr Ralph.

"The challenging ground conditions in the area, comprising mostly of soft clays, meant we had to pump 350 tonnes of Bentonite into the ground to stabilise it prior to excavation.

"Enormous volumes of concrete have been used during excavation and construction, with more than 12,500 cubic metres for completion of diaphragm support walls alone – the equivalent of five Olympic swimming pools.

"Adding to this complexity is the surrounding Toombul flood plain on which the launch box is constructed, requiring a flood wall to be built around the entire perimeter for protection in the event of a 1 in 100 year flood.

"Evacuation and emergency response procedures have also been implemented in times of torrential rain, as we experienced in May 2009," said Mr Ralph.

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Work is also progressing in Kalinga Park to assemble the large cutterhead disc which forms the face of the TBM, along with other machine parts that will be lowered underground for full assembly prior to the start of tunnelling.

By mid 2010, a total of 18 months of work will have been undertaken to construct the launch box and prepare the Kalinga Park site for TBM tunnelling, which is expected to take just over twelve months.

The country's largest Tunnel Boring Machines will commence from Kalinga Park and travel east toward Lutwyche, excavating twin 5.1 kilometre tunnels for Airport Link.

The Airport Link project is being constructed together with the Northern Busway (Windsor to Kedron), and requires a total of 15 kilometres of tunnelling. The remainder will be excavated by roadheader machines and cut and cover construction.

Over 5 million hours have been worked by a team of 2,400 personnel to date, and we expect to reach peak employment mid-year when more than 2,600 people will be working on the project.

Mr Ralph said Thiess John Holland has faced numerous challenges that come with construction of such a large-scale project – the most significant being the densely populated suburbs located within the project corridor.

“There are 31,000 households along the project alignment, and 8,000 of these residents are living next to, or within close proximity to, the nine major worksites we have operating across Brisbane from Bowen Hills through to Toombul,” he said.

“We understand the construction activities inconvenience and impact some residents; construction of this scale certainly has an impact on local communities.

“The projects will bring significant benefits to the people of Brisbane when complete in 2012, but in the meantime our team will continue to deliver these projects in a responsible manner, looking to improve our performance where practical, to minimise the impacts,” said Mr Ralph.

As the project nears completion, Kalinga Park will be re-instated and returned progressively for future community use with enhanced BBQ facilities, waterways and cycle paths.

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