

# Fast Efficient Strong Smart

## CASE STUDY

# CLEM7 Tunnel

### Project Snapshot

**Date**

Under Construction

**Project Name**

CLEM7  
(Formerly North-South Bypass Tunnel)

**Client**

Leighton Contractors and  
Baulderstone Hornibrook Bilfinger  
Berger Joint Venture (LBBJV)

**Products Used**

SuperTite™  
suspended drainage system

## Super product declared an underground success.

Brisbane's first major road tunnel, the 6.8km 'CLEM7' project, will safely and swiftly bypass the CBD. It will also require a superior system to bypass any drainage problems.

**Tunnel vision.**

Brisbane is an expanding city, with over 1 million residents and a decentralised structure. Movement about the city is critical, so when work began in 2006 on the Clem Jones Tunnel (CLEM7), it signified a huge leap forward for cross-town travel.

At nearly 7km, the tunnel and its connections represent a \$3 billion investment that will link both sides of the Brisbane River and five major motorways and arterials. With over 400,000 vehicles currently traveling along these routes every day, this new toll road under the river and CBD will cut out 23 sets of traffic lights and reduce travel times by up to 30%.

The tunnel itself is 4.8km and consists of twin 2-lane north-south tunnels. Design and construction involved two 4000 tonne tunnel boring machines (TBM's) digging continuously for 18 months, finally breaking through in May 2009. Leighton Contractors and Baulderstone Hornibrook Bilfinger Berger Joint Venture (LBBJV) has managed the project from the beginning, employing over 1500 people in all areas, including drainage.

**SMART**

**SuperTite™**  
Suspended Drainage System



**James Hardie**  
Concrete Pipes

**Super tight timeframe, Supertite™ solution.**

The challenges of a tunnel scenario meant James Hardie's support was needed from the beginning. Key requirements were a leak and fire resistant drainage pipe that could be suspended easily. Martin Wieser, TBM manager for LBBJV and Brad Tite, drainage design team leader from consultants Maunsell/Parson Brinkerhoff, worked together with James Hardie to find the best product.

"We chose Supertite™ concrete pipes and fittings for their superior joining system and fire rating," said Brad. This allowed fast installation within the narrow timeframe. The pipe's lighter composition meant it could be easily suspended in the service tunnel, with special T-junctions manufactured to connect drainage pits from the tunnel roadway above to the main 375mm pipes.

**"The design of the Supertite™ pipes made them perfect for the subterranean world of the CLEM7."**

As is standard on all major projects, on-site training was provided by James Hardie to the LBBJV installers, ensuring correct connections of the various pipes and fittings.

**Round the clock service.**

For such a project, confined in many ways, it was vital that James Hardie deliver the service level required. "The tunnel boring machines went 24 hours a day – they don't stop," says Anthony Kim, tunnel drainage project engineer for LBBJV. He worked with James Hardie's sales team to develop an order and delivery framework that kept the project on schedule.

In total, over 8km of Supertite™ pipes and 300 special junctions were delivered for this drainage project. And when the much-anticipated CLEM7 opens to traffic in 2010, it will represent a significant feat of modern engineering.

**Strong. Fast. Adaptable. Smart.**

Our progressive, innovative approach creates high performance, engineered solutions for above and below ground stormwater drainage applications.

Call James Hardie on the number below to find out all the benefits for your next project.

**"I've been impressed by the level of service by James Hardie, especially the support of the deliveries and order management which was critical to us"**

**Anthony Kim - Project Engineer**



Ask James Hardie™  
 Call 1800 659 850  
[www.jameshardiepipes.com.au](http://www.jameshardiepipes.com.au)

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**James Hardie**  
 Concrete Pipes