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## Memorandum

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To	THE AUSTRALIAN STOCK EXCHANGE	From	SIMON CURTIS
Attention	THE COMPANY ANNOUNCEMENTS OFFICE	Date	23 SEPTEMBER 2003
Facsimile number	E-Lodgements	Our Reference	
Subject	COFFEY'S EXPERTISE GOES UNDERGROUND IN SMART TUNNELLING DESIGN FOR SINGAPORE	Number of Pages including this page	3

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Dear Sir / Madam,

Please refer to the attached media release.

Yours faithfully

A handwritten signature in black ink, appearing to read "Simon Curtis". The signature is fluid and cursive, with a long horizontal stroke at the end.

Simon Curtis  
Company Secretary

## MEDIA RELEASE

# **Coffey's expertise goes underground in smart tunnelling design for Singapore**

(Sydney, Australia, 23 September 2003 ASX:COF) Coffey International Limited's growing reputation in the design and construction of tunnels and underground works has won them another contract to work with Downer Engineering in a demanding tunnelling project on the west coast of Singapore. This project, awarded by PowerGrid Ltd which develops, owns and maintains the transmission system in Singapore, involves the design & construction of a transmission cable tunnel from a power plant to a substation in the west.

Fresh from the recently completed EnergyAustralia tunnel in Sydney, Coffey will work with Downer Engineering (a division of Downer EDI Limited) to build 13m and 15m diameter, approximately 32m deep permanent shafts, a temporary access shaft and a bored 5.4m internal diameter tunnel. The tunnel will be more than 2.7 kilometres long and is situated in Singapore's industrial port area. At each shaft, two mined (NATM) tunnels will be driven in soil or weak rock materials to provide for tunnel boring machine (TBM) launching and receiving and permanent 7.7m span cable tunnel sections. The main tunnel length will be driven using an earth pressure balancing TBM.

The project is currently at detailed design stage and is on a tight schedule to allow shaft excavation and tunnelling to get underway.

The Singapore tunnel project poses particular challenges due to its location and also because of the complex ground conditions. This includes shaft excavation through reclamation fill and the very soft and difficult Kallang Formation soils and tunnelling through soil and rock materials, including karstic limestone of the Jurong Formation.

Paul Groves, one of Coffey's principal tunnel engineers, said, "This tunnel is particularly interesting. The project alignment includes tight horizontal 130m radius curves to navigate between the piles of an overhead elevated highway as well as canal structures. So we're designing tapered segmental lining rings and the TBM itself is articulated to negotiate the curves.

"We've got a lot of existing infrastructure to look after while we tunnel, including large piled bridge piers, so we are using state-of-the-art numerical methods, coupled with our previous experience to understand their behaviour".

Downer's Engineering Manager, Mr Bill Atkinson, commented that Coffey was chosen for the project because of the company's expertise in the design of underground works, innovative approach and practical solutions to the specific challenges.

Some innovative design elements being developed by Coffey and Downer's design and construction team include the use of sprayed concrete permanent mined tunnel linings, permanent diaphragm walls for the shafts and the use of recharge wells to assist control of seepage related consolidation.

Groves considers that the Singapore job will be a landmark project. "Soft ground and mixed face tunnelling beneath an urban areas is never straightforward and this project is no exception. The project further raises Coffey's profile in the area of tunnelling and it's good to have a job such as this in Asia. Coffey is becoming a serious player in the Asia-Pacific regional tunnelling market" he said.

The project cost is around \$70 million and it will take approximately two years to complete.

### **About Coffey**

Coffey International Limited provides both physical and social infrastructure solutions to business, government and development assistance agencies. The company operates two divisions: the Consulting Business, which comprises Coffey Geosciences Control Testing Laboratories and Water Studies, and the International Development Business, which comprises SAGRIC International, Coffey MPW and Landmarc.

The Company employs around 600 people and is one of Australia's largest service providers to the Asia Pacific Region. The Company is listed on the Australian Stock Exchange.

During the 2002/03 financial year, Coffey generated \$38 million revenue in Australia, \$38 million in South East Asia, \$21 million in the Pacific and \$13 million in China, Sri Lanka, India and the Middle East.

For more information, please visit [www.coffey.com.au](http://www.coffey.com.au).

**ENDS**

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