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Newsletter No. 2

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## Townsville - Concrete in the Tropics Seminar - Simplifying Civil Construction Systems using Fibres



There was a record attendance at the recent concrete seminar in Townsville held in conjunction with James Cook University (JCU), Concrete Institute of Australia (CIA) and Engineers Australia (EA).

Tony Collister, Fibercon's North Queensland representative, chaired the meeting of over 80 Engineers, Builders, Suppliers and Concrete professionals. Tony is the North Qld CIA Chapter President.

International guest speaker, Rajesh Dhakal of the University of Canterbury, covered a fascinating research program on seismic and failure response of full scale precast floor and column systems - a timely review of results given the recent Christchurch Earthquakes.

Mark Combe of Fibercon covered Simplifying Civil

Construction Systems using Fibres. Both steel and plastic fibres can be used very effectively to save time and money and give engineering confidence that the reinforcing is in the product.

Other speakers included Daksh Baweja – DMC Advisory, Bruce Ireland – Danley, Rabin Tuladhar – JCU, Lex Vanderstay – Transport and Main Roads and Tony Collister - Fibercon.

Lex Vanderstay gave an insightful talk and brought into very sharp focus the massive cost of poor workmanship and sloppy practises that the Transport and Main Roads see on a regular basis. The cost to the State, the Taxpayer and also the Contractor are enormous, and can fortunately be avoided with education, experience and supervision.

All Papers are available on request – please Email – [Tonyc@fibercon.com.au](mailto:Tonyc@fibercon.com.au)

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## Mangoola Mine, Anvil Hill, Muswellbrook – New Upper Hunter Mine Development

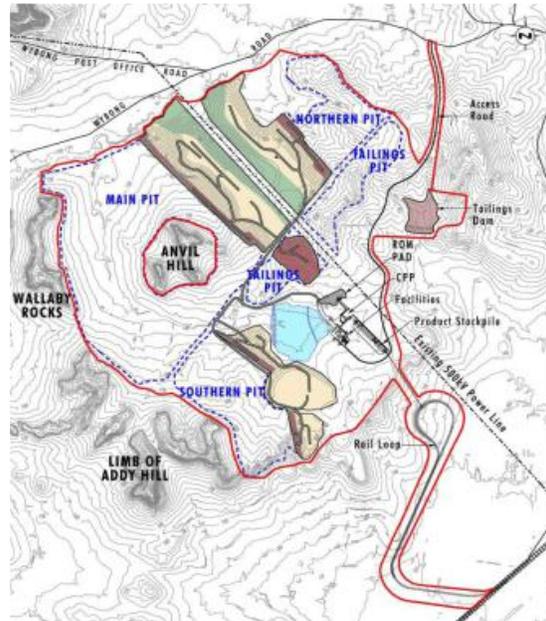
- Mangoola Coal Mine Development is an Xstrata Coal Project which will extract and process up to 10.5 Million Tonnes per annum of coal from the reserve for a period of 21 years, starting production in 2011.
- Fibercon has once again been successful in providing all the needs of Steel Fibre Reinforced concrete to the new Mangoola Mine development, 20 kilometres West of Muswellbrook.
- Hanson concrete has provided 20,000 cubic meters to the project from an on-site plant – 1,900 cubic metres were Fibercon steel fibre reinforced concrete.
- Most of the Fibercon S38 Steel Fibre has been used in the heavy duty workshop Floors, ROM Pad and Wash Bays. Some has been used in the high impact, high abrasion coal transfer areas.
- Laurie Rixon from Hanson said the Fibercon S38 Steel Fibre was easy to use, easy to mix and they knew that they would not have problems if contractors were going to pump the mix. Nearly all of

the 1,900 Cubic Metres of Fibercon Steel Fibre concrete was pumped, doses ranged from 50 to 30 kilograms per cubic metre.

- Thomas and Coffey Site Principal, Kevin Rigby, was happy with the overall fibre performance. He was particularly impressed with how the Fibercon S38 Fibres finished below the surface.
- Design Engineers, Parsons Brinckerhoff required slab that would be incredibly tough and hard working, and able to last the time span.



Equipment that will be using our purpose design slabs



Anvil Hill Site, West of Muswellbrook

For more information on Heavy Duty Slabs contact [Markc@fibercon.com.au](mailto:Markc@fibercon.com.au)

## Fibercon continues its focus on R&D



Over the past year at James Cook University (JCU) a research project into the structural behaviour of steel fibre reinforced slabs with L class reinforcement has been conducted using different types of steel fibres at different dosages. Tony Collister has been part of the project acting as both a consultant and member of the experimental team.

The tests are a replication of the work done by (Gilbert & Sakka 2007) with the inclusion of fibres to determine what effect they may have on the failure mechanism.

This continues the long 8 year R&D

relationship between JCU and Fibercon. Fibercon and JCU have investigated Blast Properties of SFRC, Abrasion & Gouging of SFRC, Structural Analysis of One Way SFRC Slabs, Tests for Shear and Bending of SFRC beams and SIFCON Performance. The largest program so far has been the full scale construction and testing of a 100m<sup>2</sup> pile supported, suspended SFRC slab.

Fibercon continues its focus on R&D enabling them to provide the latest technology solutions for their clients.

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