



PROJECT REPORT SHEET: GROUTING AROUND CABLES IN THRUST BORES

**BluCem EA55** Low Thermal Cementitious Grout  
HIGH VOLTAGE FEEDER, ALICE SPRINGS





# BluCem EA55 Low Thermal Cementitious Grout

## HV FEEDER, ALICE SPRINGS

The works involved 8km of trenching in urban areas with specialized flow-able low TR backfill and 2km of conduit for future 22KV upgrade in Alice Springs.

**PROJECT COMPLETION:** NOVEMBER 2010  
**CLIENT/END USER:** BMD CONSTRUCTIONS & ANCHORMAC FOR NT POWER AND WATER

### APPLICATION

WHERE WE USED **BLUCEM EA55 LOW THERMAL RESISTIVITY GROUT**

Over 300 cubic metres of BluCem EA55 was pumped into the annulus between the PVC cable conduits and the steel sleeve pipe to ensure that there were no air gaps which would resist the transfer of heat away from the HV cables.

### WHY WE USED BLUCEM EA55 LOW THERMAL RESISTIVITY GROUT

The electrical design demanded that cement based backfill around PVC cable conduits in trenches and in under-bores had a thermal resistivity (TR) less than 0.9 and low exothermic heat to avoid heat damage to the conduits during curing. The BluCem EA55 grout could also be supplied in 1200kg bulk bags which allowed batching in 5.0 cubic metre agitators and pumping through a conventional concrete pump.

### FEATURES

- BluCem EA55 has a laboratory measured TR of 0.67
- BluCem EA55 has very low exothermic heat during curing
- BluCem EA55 has low bleed, high fluidity for pumping long distance and high compressive strength (>35Mpa)

### BENEFITS

- Batching in agitators and allowed continuous delivery of the grout
- Allows designers to assume high thermal transfer around the cables which offers superior cable ratings economies in selection of cable sizes





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### BENEFITS CONTINUED

- Eliminates the risk of damage to PVC conduits during installation of the grout
- Ensures continuous pumping and complete filling of the annulus
- High compressive strength provides structural longevity of the road pavement above the under-bore

### SUMMARY

The contractor and the asset owner benefited from the technology offered by the BluCem EA55 grout where the backfilling of the underbores was within expected construction timetables and through support from Bluey Technologies' engineers the product was batched and placed in a safe and efficient manner with all of the expected technical benefits realised.

