

# NUMERICAL SIMULATIONS OF LARGE SCALE BLAST EFFECTS ON COMMERCIAL STYLE STRUCTURES

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## ABSTRACT

The Defence Ordnance Safety Group (DOSG) has carried out a series of large scale explosives trials at Woomera, South Australia over the course of many years. These trials have contributed to the body of knowledge relating to building damage from explosive events. The latest trials in the series involved the assessment of blast effects on typical British Style housing in May 2006 and commercial style buildings in March 2007. Varying numerical modelling software packages have been used to conduct “blind” replications of the tests.

This paper describes the commercial building test conducted, the data gathered and one set of numerical simulations conducted (At this stage the numerical model for the domestic house structure is under construction and will be reported in due course). The paper goes on to show a comparison of the experimental and numerical results, and draws conclusions on the applicability of numerical simulations on the damage estimation for such structures subjected to large scale blasts.