THE DEVELOPMENT OF A MODEL FOR ASSESSING THE THROW OF STRUCTURAL DEBRIS PRODUCED DURING THE ATTACK OF SURFACE TARGETS BY AIR LAUNCHED MUNITIONS

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With developments in modern guided munitions over recent years, the attack of surface targets has become increasingly clinical. This has resulted in the ability to attack targets with precision weapons, thereby significantly reducing the likelihood of injury and damage being caused to nearby personnel and buildings - often referred to as collateral damage. Damage may be inflicted to collateral objects (personnel, equipment or infrastructure) as a result of a number of mechanisms, namely, the direct effects of the blast and fragmentation of the weapon, by being physically displaced, or by being stuck by debris generated as a result of the blast, such as pieces of failing structures.

This paper summarises an approach to assess the distribution of structural debris generated by the effects of a munition detonating within a building. Experimental and analytical models are discussed and the text provides an overview of a model being developed for assessing the likelihood of collateral injury or damage produced by such blast induced debris throw.