

# Case Study

## Warship in Harbour

### Assessment



System Design Evaluation Ltd



## Requirement

System Design Evaluation Ltd (SDE) were tasked to provide support to the Aircraft Carrier Alliance to produce a Warship In Harbour (WIH) Assessment for the Queen Elizabeth Class Carrier, in support of the vessel's Ship Explosives Safety Case.

## Approach

The UK MOD's Harbour Protection Strategy requires that Naval Base Duty Holders manage the risks from explosives posed to third parties by an ammunitioned WIH. The level of risk posed by an ammunitioned warship alongside is defined in the WIH Methodology Suite Overview as a function of the potential magnitude of an on board event, the likelihood of that event occurring and the scale of the consequences if that event does occur. The present assessment covered the first two of these key elements:

- Effective Net Explosive Quantity (ENEQ) - The munition ENEQ, as published in the munition Ship Explosives Store Safety Instruction (SEXSSI) are used.
- Likelihood of that ENEQ detonating together in a practically instantaneous event - A range of external threats with potential WIH implications have been collated together to form a worst case / most likely harbour environment, termed the Generic Harbour Environment (GHE). In each case the probability of that initiating event occurring is presented.

OME Safety is a core capability and the team maintain currency and competency with relevant policies, including JSPs 520, 375 and 862, DSA02-DMR along with POSMS, POEMS and Def Stan 00-56.

## Benefits

The output of the WIH assessment is a Warship Hazard Footprint Statement (WHFS), which can be used as direct inputs to the Naval Base Duty Holder's consequence models.

## Service

- Warship In Harbour Assessment (WIH)

## Expertise

- Explosives Safety Management at platform level for QEC
- Ship/Class Explosive Safety Cases/Reports for QEC
- Safety Management Plans and Certification Strategies under JSP 430/ DSA02-DMR
- Naval Environment Assessment Statements (NEAS)
- Ship Explosives Store Safety Instruction (SEXSSIs)

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