

# SCEME

**Summer meeting  
Wednesday 08 June 2011**

**Larry Stokes**  
**Property Underwriting Manager**  
**Zurich Insurance**





# Consequences?

- School totally destroyed
- Community hub
- Children sent to 3 different schools
- No more evening classes / clubs
- LEA resource – Impact on other projects

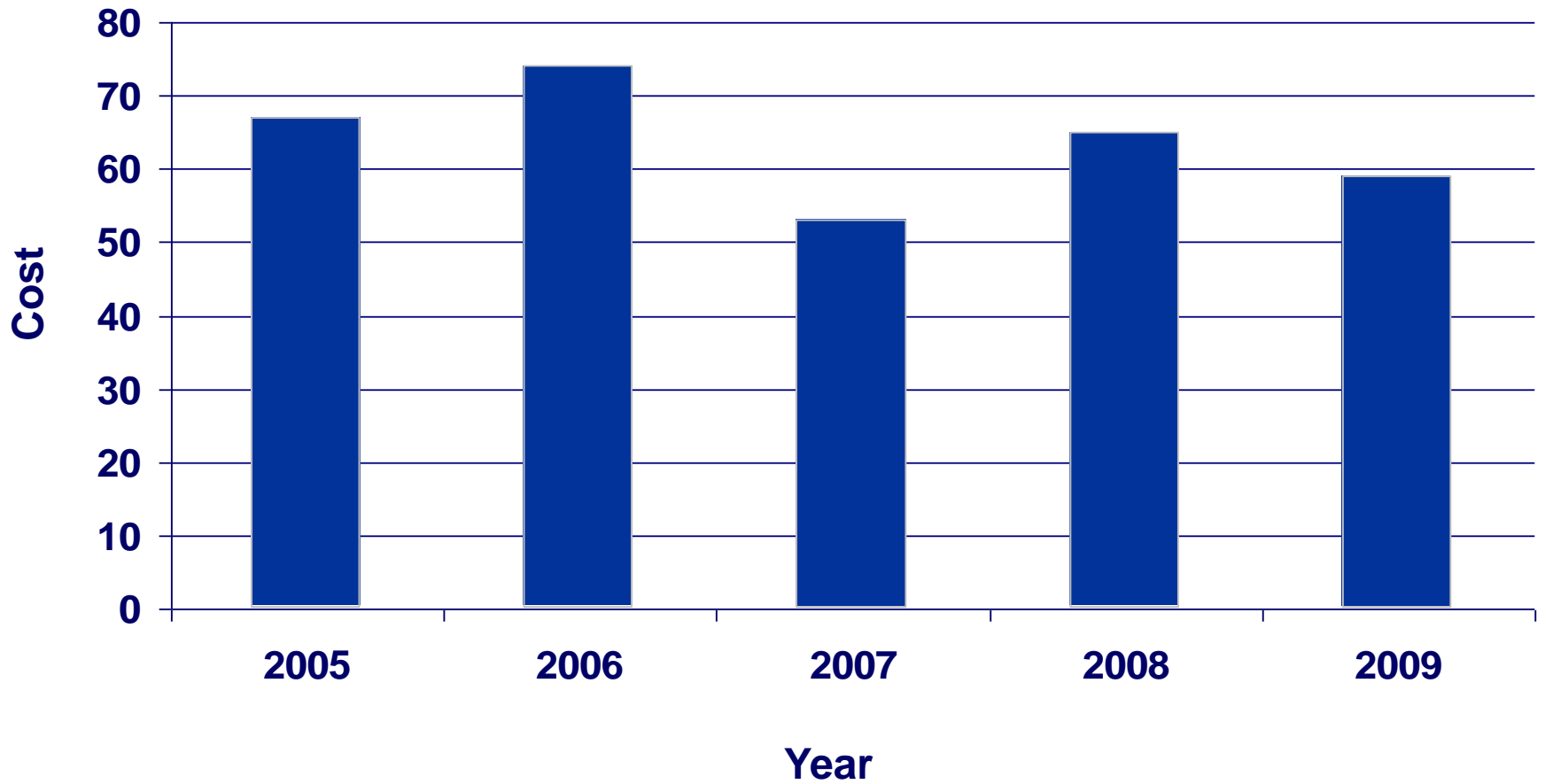


# Consequences?

- School morale
- Staff stress
- Impact on education provision
- Impact on families
- Viability of the school



# Cost (£m)



# A different perspective ...



- 90,000 schoolchildren have education disrupted
- 80,000 families affected
- 320,000 people involved
- One shot at education

# School fires



- Problem for over 40 years
- Not just an arson issue
- Fire resistance and suppression not addressed
- Infrastructure vulnerable, even new schools burn
- Sprinkler agenda stalled, BSF dead
- Educate children about the consequences
- Insurance costs are the tip of the iceberg

# The benefits



- Should be integral to the design
  - not applied to the design
- Sprinkler provision alters the risk profile
- Effective fire suppression
- Allows people to think beyond AD. B Building Regulations
- Gives unprecedented freedom to designers

# Potential Design Freedoms & Tradeoffs



- Increased compartment size
- Flexibility in travel distances
- Freedom in layout
- Reduced fire resistance to 'elements of structure'
- Reduced fire alarm provision
- Reduced formal fire separation

# Potential Design Freedoms & Tradeoffs



- Fewer fire doors
- Improved Disabled access
- Fewer fire dampers
- Surface finishes
- Potential for phased evacuation
- Potential for reduced stair provision

# Risk Improvements offered by Sprinklers

## New-build benefits



- Most cost effective time to install
- Design flexibility opportunities
- Life safety benefits from the start
  - Inc fire fighter safety
- Unrivalled property protection
  - Protecting the investment
  - Sustainable issues
- Insurance benefits / savings in premiums
- Business Continuity

# Automatic Sprinkler Systems



## The Real Cost

- Up to 65% reduction in fire premium
- Potentially 11-12 year pay back on this basis alone
- Look at the trade-offs and Design Freedoms
- More attractive in the Insurance Market = lower premiums
- Academy agenda

# Which do you prefer?

- 60 Litres / minute from 2 sprinkler heads, operating directly over the seat of fire 90 seconds after ignition?



**OR**

- 1000 Litres / minute from 3 or 4 fire brigade hoses, operating 20 minutes after the fire is reported?



# Design concerns

- Increased reliance on the School / Academy facility
- Challenging design concepts
- Modern methods of construction
- Innovative materials
- Environmental / Sustainability goals
- Fragmented design process
- Concerns relate to new build **and** refurbishment and re-modelling schemes



# Risk reduction – the principles

- Effective Risk Assessments at design stage
- Appropriate Construction
- Compartmentation
- Fire detection / sprinklers
- Site security and fencing
- Alarm, Access control, CCTV
- Waste management
- Staff awareness
- BCM



# Appropriate Construction?



# Modern Methods of Construction

- Limited experience
- Unproven technologies
- Challenging material
- Potential for disproportionate losses
- Resistance to Storm / Flood?
- Life cycle performance?
- **Sustainable Construction?**



# Site Security & Fencing

- Develop Security Strategy in early stages of the design
- Unattractive security fencing can be avoided
- Make the boundaries work for you
- Use the building envelope for security
- Fencing solutions should be ‘designed’



# Security Measures

- Robust and ‘smart’ access control strategies – consult users
- Appropriate security alarm design
- CCTV provision as part of overall strategy - record only systems offer no measurable security
- Zoning of the building is key
- Work with Insurers at early stages of design to agree strategies



# Maintenance & Housekeeping



# Is history being repeated?



# The worst can happen!

