



SECURITY SYSTEMS - ALTERNATIVES

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Static Guard vs CCTV System



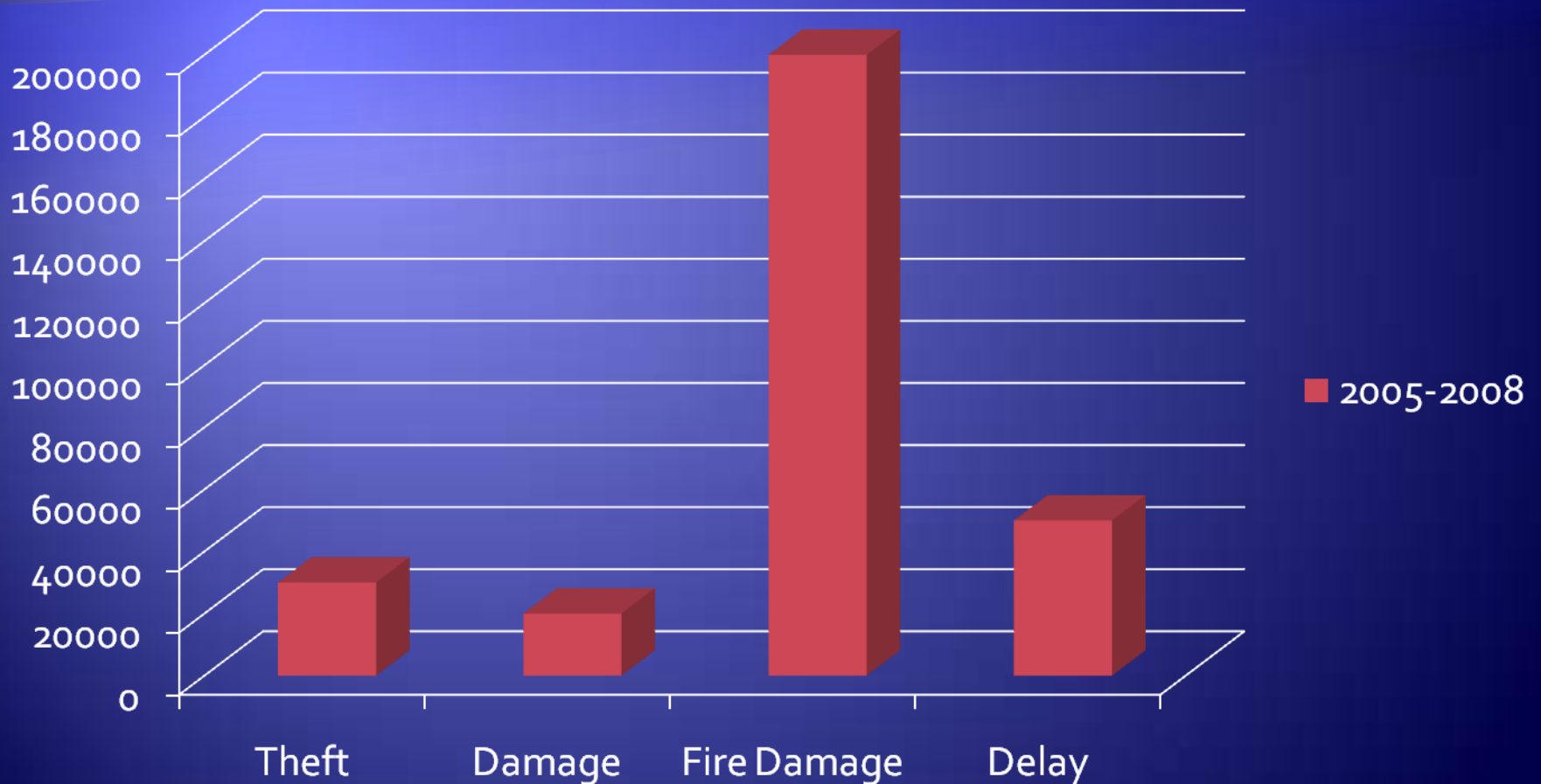






Total Loss to Business

2005-2008



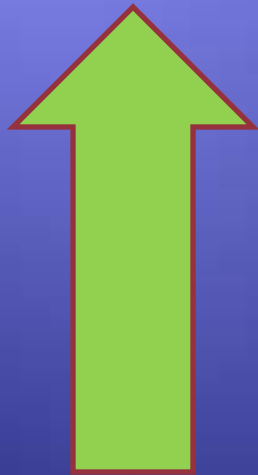
Reliability of Security Guards

- ◆ Unreliable timekeeping
- ◆ Sporadic Patrols
- ◆ Missing in Action
- ◆ Sleeping on Job
- ◆ Poor Morale
- ◆ Intimidated
- ◆ Challenge!



The Conundrum?

- ◆ Improve security of our sites
- ◆ Reduce reliance on static guards



Static Guard vs CCTV System



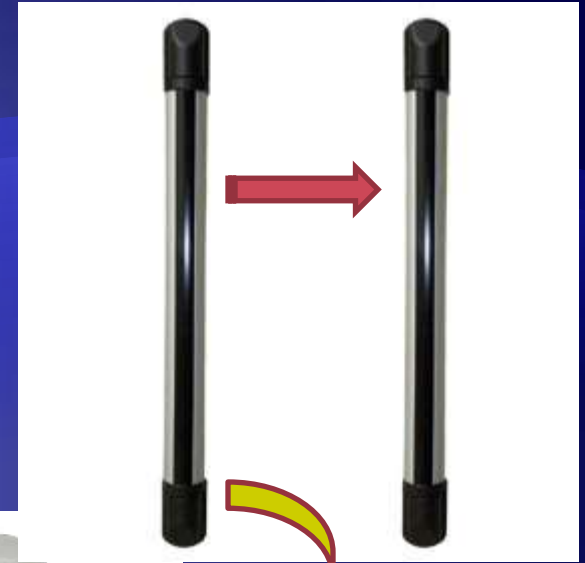
CHALLENGE!



DETERRENT!

First CCTV System

- ◆ Based on Motion Beam Detectors
- ◆ Positioned around site perimeter
- ◆ Break of beam triggers motion sensor cameras
- ◆ Alerts control room
- ◆ Sounds Alarm & verbal challenge
- ◆ Contact Police or response unit



Pros & Cons

◆ Pros

- ◆ Initial systems were used with on site guard.
- ◆ Better performance by guard as he was under surveillance
- ◆ Capture of images
- ◆ More deterrent for children
- ◆ Reduction in incidents after installation
- ◆ Monitoring Reports
- ◆ Monitoring costs lower

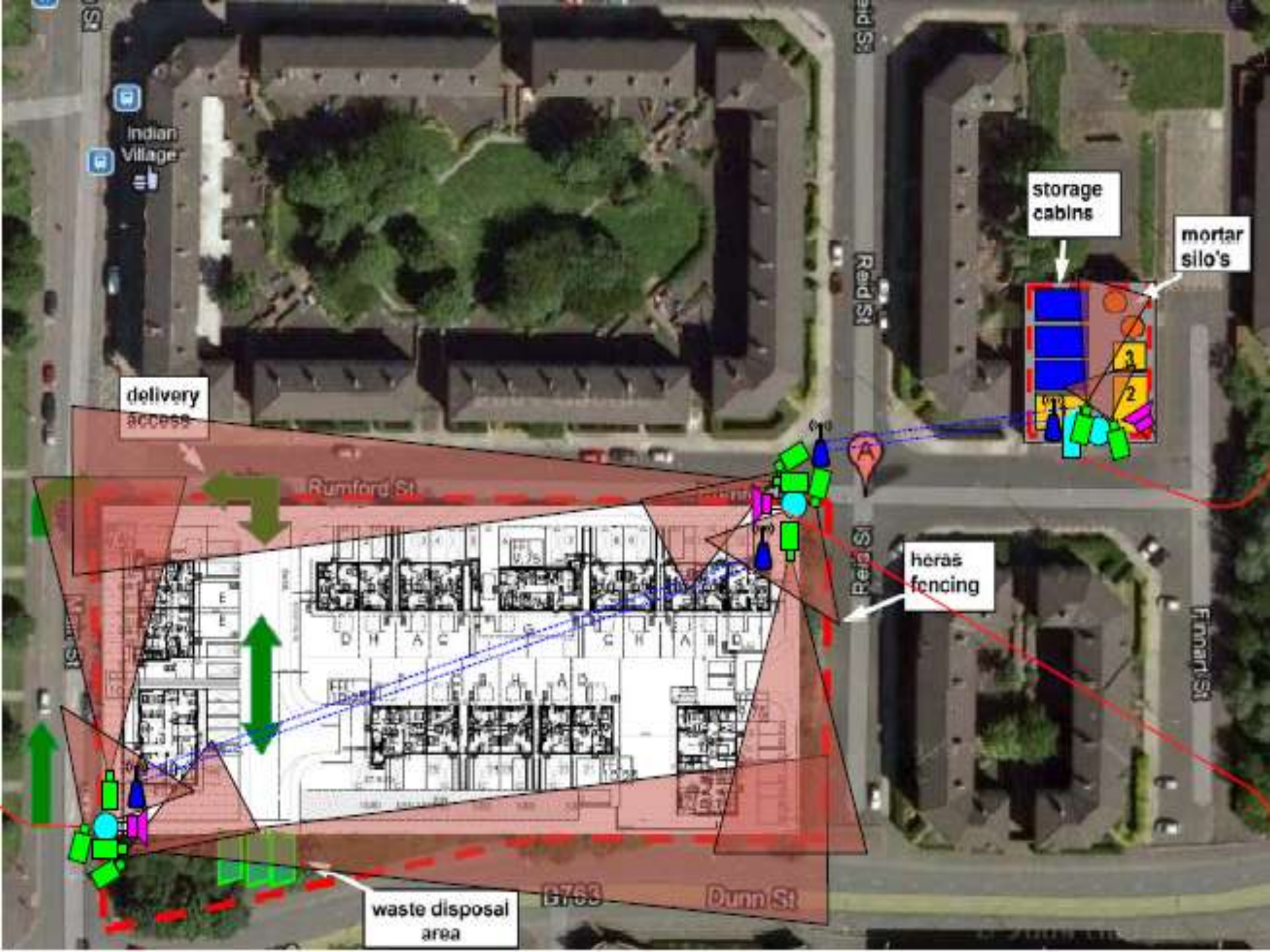
◆ Cons

- ◆ Expensive (Install & Removal)
- ◆ Mistake in purchase of equipment with promise of re-use
- ◆ Broadband Issues slowed response from control room
- ◆ Power outages – no automatic reboot
- ◆ Column Bases
- ◆ Easy trigger of beams
- ◆ Not versatile at site handovers

Next Generation - CCTV

- ◆ New supplier
- ◆ Motion Sensor Cameras Only.
- ◆ Smaller/Lightweight cameras
- ◆ More Flexibility
- ◆ Better Interface
- ◆ Added Value Service
- ◆ Better Appreciation of Construction Sites







ALARM &
VERBAL
CHALLENGE

Example of Videos

Site 1

Site 2

Start: Friday
End: Monday

02/03/2012 at 15:00.
05/03/2012 at 07:30.

Date	Time	Events
Friday 02/03/2012	15:00	Site is open.
Friday 02/03/2012	15:30	Site is open.
Friday 02/03/2012	16:00	Site is open.
Friday 02/03/2012	16:30	Site is open.
Friday 02/03/2012	16:48	Manager leaves from the building and manager enters the site and.
Friday 02/03/2012	17:00	Conducted a detailed virtual tour of the whole site, everything is quiet. (Manager is on site)
Friday 02/03/2012	17:07	Manager leaves.
Friday 02/03/2012	17:30	Conducted a detailed virtual tour of the whole site, everything is quiet.
Friday 02/03/2012	18:00	Conducted a detailed virtual tour of the whole site, everything is quiet.
Friday 02/03/2012	18:30	Conducted a detailed virtual tour of the whole site, everything is quiet.
Saturday 03/03/2012	06:00	Conducted a detailed virtual tour of the whole site, everything is quiet.
Saturday 03/03/2012	06:25	Staff arrives.
Saturday 03/03/2012	06:30	Conducted a detailed virtual tour of the whole site, everything is quiet.
Saturday 03/03/2012	06:40	Staff on tour.
Saturday 03/03/2012	07:00	Conducted a detailed virtual tour of the whole site, everything is quiet.
Saturday 03/03/2012	07:30	Conducted a detailed virtual tour of the whole site, everything is quiet.
Saturday 03/03/2012	07:34	Workers arrive.
Saturday 03/03/2012	08:00	Site is open.

Tuesday 05/07/2011	21:30	Conducted a detailed virtual tour of the whole site, everything is quiet.
Tuesday 05/07/2011	21:44	Two guys enter the site. I set off alarm they ran away. http://www.youtube.com/watch?v=I3T1G6RKcII
Tuesday 05/07/2011	22:00	Conducted a detailed virtual tour of the whole site, everything is quiet.
Sunday 04/09/2011	14:43	Kids entered the site from block 2. I set off the alarm and they ran away from where they entered. http://www.youtube.com/watch?v=UO8JvMIKhvc
Saturday 17/09/2011	17:17	Visibility of camera affected which cover lower block due to a sheet.
Sunday 18/09/2011	00:10	Mobile patrol arrives. Guard checks the cabin side and site from car's window and leaves at 00:14.
Sunday 18/09/2011	08:03	Worker enters the site. I spoke to him, he told me that they are two joiners from J. Mackay joinery and will be working today.

CCTV Set Up Procedure

- ◆ Proposals
- ◆ Broadband Speed Check
- ◆ BT Lines Order (early) - & Broadband order
- ◆ Temporary Power Installation (Not Generator)
- ◆ Installation of power/data cabling
 - ◆ Wireless Bridges
- ◆ Installation of Columns, Cameras & Speakers
- ◆ Control Cabinet (in site office)
- ◆ Site Lighting

During Construction Phase

- ◆ Alert operatives at site induction of CCTV system
 - ◆ Contact with cabling
 - ◆ Damage to equipment
 - ◆ Monitoring of site boundary (theft of materials)
- ◆ Consider & Discuss staged site handover with CCTV provider (influence set up)
- ◆ Monitoring Alerts & Evidence
- ◆ Timely alert to CCTV supplier of alterations req.

CCTV Signs

- ◆ Display “Site Monitored by CCTV Sign”
- ◆ Absence of signs may affect use of evidence in criminal action.



Support from Police



- ◆ Contact Community Police & make them aware of CCTV set up.
- ◆ Consultation with Police with CCTV images invariably leads to identification of “individuals”

Further Support

- ◆ Emergency Response Security
- ◆ Mobile Patrols
- ◆ Combination of CCTV & Security (depending on Risk Assessment of area)



CCTV Columns

- ◆ Installation
 - ◆ Base
 - ◆ Temporary
- ◆ Reuse
- ◆ Removal
- ◆ Maintenance



SIA Approval

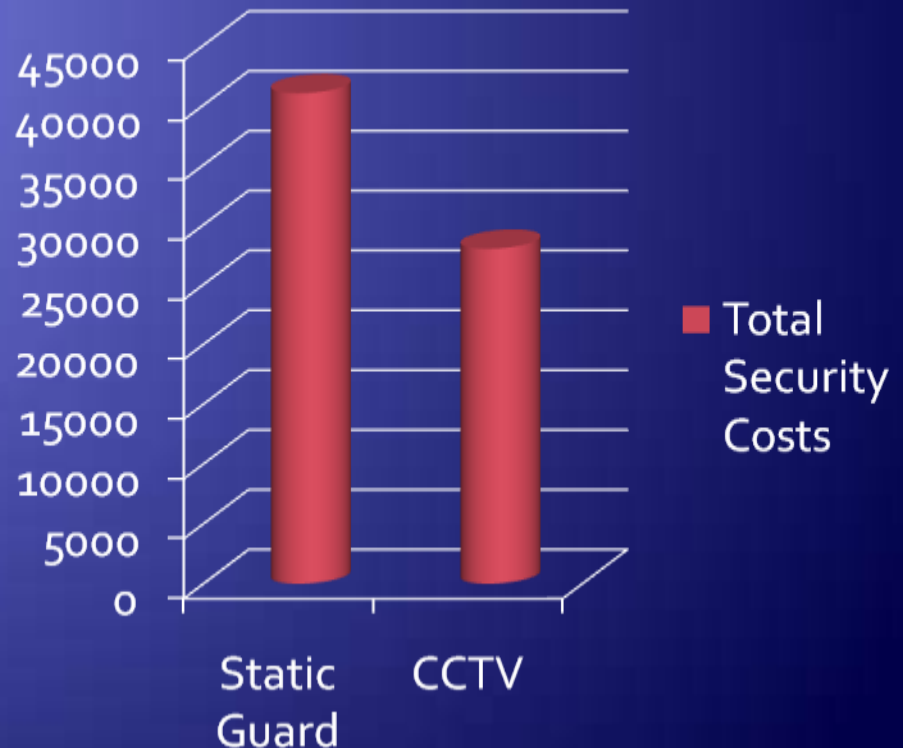
- ◆ Do CCTV companies need SIA Approval?
- ◆ Yes - If they are carrying out licensed activities (if monitoring control room is in UK!)
- ◆ Owners of CCTV companies should have SIA License.
- ◆ UK Based CCTV monitors need licence



Business Case

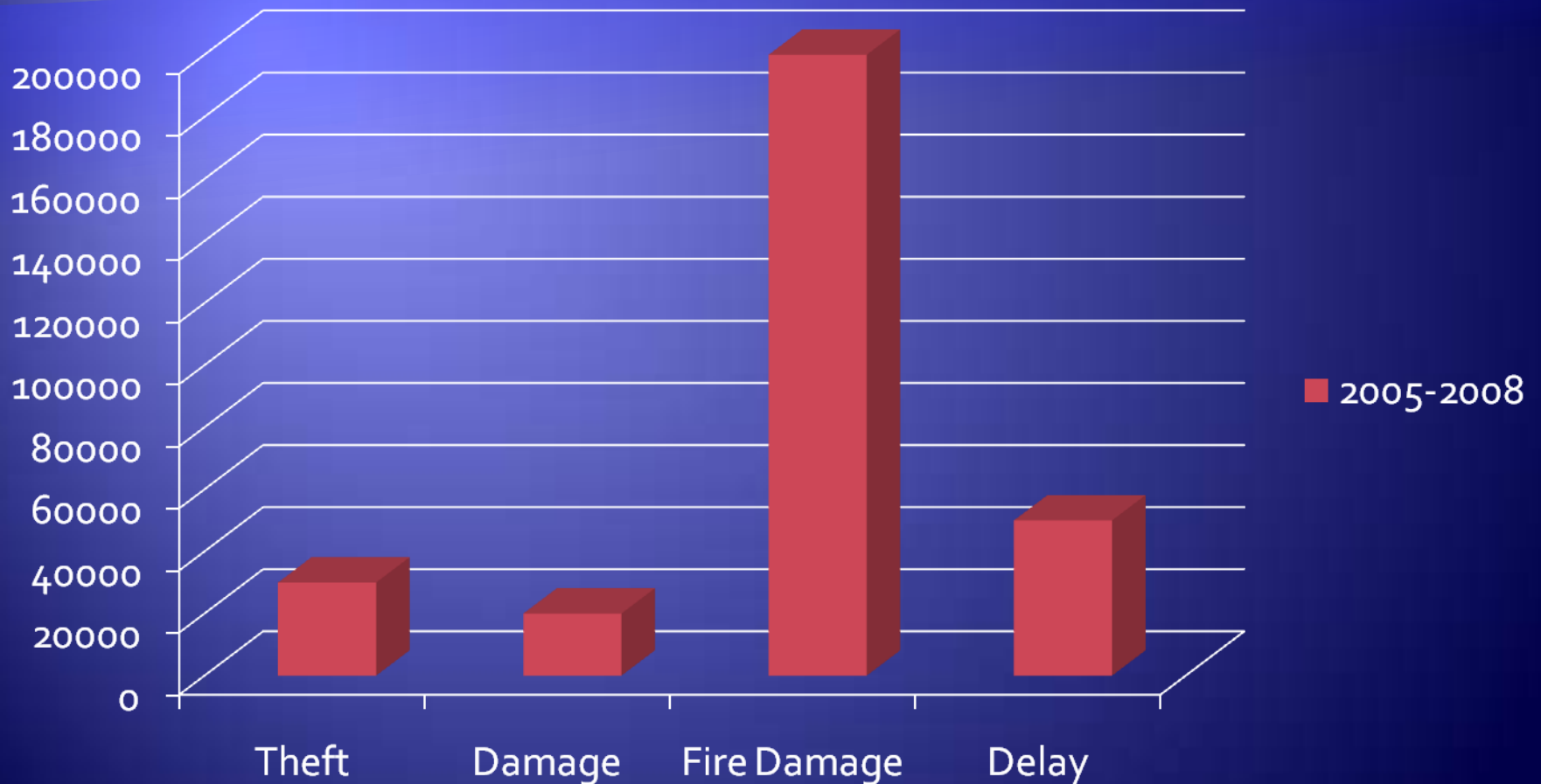
- ◆ 52 week project
- ◆ Static Guard
 - ◆ £41,000
- ◆ CCTV System
 - ◆ Wk 1-8 Guard = £6,500
 - ◆ CCTV Set Up = £5,000
 - ◆ Monthly Cost = £16,500
 - ◆ Total = £28,000
 - ◆ 32% Saving

Total Security Costs



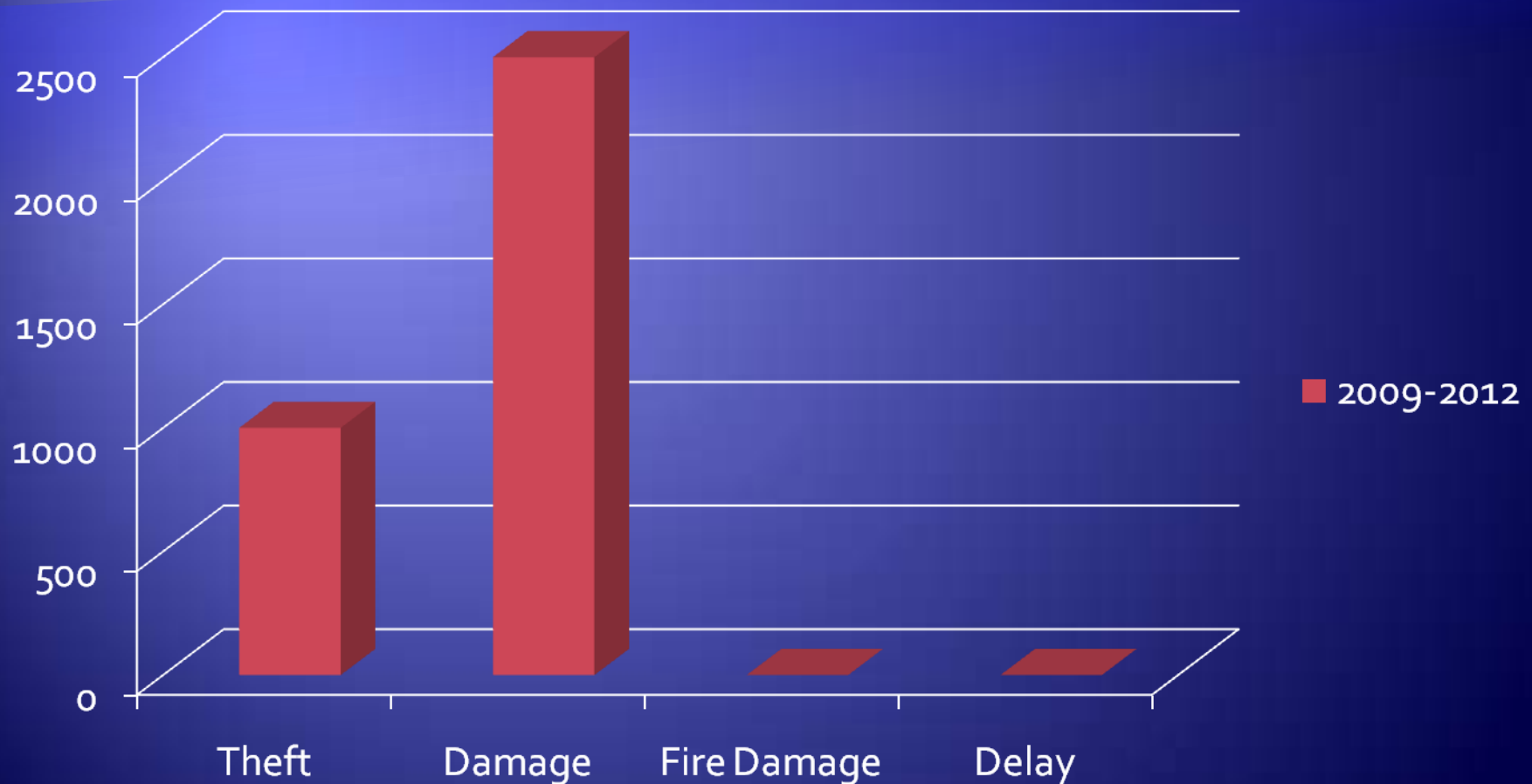
Total Loss to Business

2005-2008



Total Loss to Business – Post CCTV

2009-2012



CCTV Advantages

DIRECT

- ◆ Business Case
- ◆ Effective
- ◆ Reliable
- ◆ Deterrent
- ◆ Health and Safety
- ◆ Evidence
- ◆ Reduction in Incidents
- ◆ Reduction in Insurance premiums

INDIRECT

- ◆ Off Monitoring Recording
- ◆ Record of Staff/Operative movements
- ◆ Deterrent to inside job incidents
- ◆ Neighbourhood Assistance
- ◆ Considerate Constructors Scheme
- ◆ Removes the "intimidation"

Disadvantages

- ◆ Power cuts
- ◆ Broadband Speed & Reliability
- ◆ BT Line Installation (Lead in Time)
- ◆ Additional Power/Data cabling on site
- ◆ Overnight generator use – built up areas are a problem for noise (battery alternative)
- ◆ Disruption of connection to site has to be regarded as an attempt to sabotage system.
- ◆ Sometimes static guards have to be parachuted in if there is a breakdown in the system.

3G Technology

- ◆ Some CCTV Systems operate using 3G Mobile Technology.
- ◆ This will eliminate the need for BT Lines
- ◆ Picture quality and overall cost is comparable.
- ◆ We have found reliability and service is poorer



Additional Benefits

- ◆ Out of Hours Fire Monitoring
- ◆ Wireless connection to broadband – alerting monitoring agent.
- ◆ Monitoring agent contacts Fire Services
- ◆ System automatically contacts Site Manager with location of fire detector activation.
- ◆ Live Site Monitoring?
 - ◆ CCTV Cameras pointing inward.
 - ◆ Monitoring & Recording of site activities
 - ◆ Access by senior management
 - ◆ Remote Intervention?
 - ◆ The ultimate Big Brother is watching you!!!

In Summary

- ◆ There are good Static Guard Companies available
- ◆ CCTV is a personal choice
- ◆ There are Pros and Cons
- ◆ I believe that the benefits outweigh the disadvantages
- ◆ Beware companies who are used to fixed installations – adapting to construction sites.
- ◆ Also beware there are a lot of suppliers & security companies moving into CCTV provision.
- ◆ Don't Buy – Rent – keep management with CCTV

Pavement Complaint!