



CITY OF LONDON

High quality services for the City, for London and for the country as a whole



# “Working At Height”

*- all change or just business as usual?*

**Tony Macklin BA MCIEH CMIOSH**  
*Chartered Environmental Health Practitioner*

**Principal Environmental Health Officer**  
**City of London Corporation**



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

# **MY FIRST THOUGHTS ON TODAY'S CONTENT**

- **Quick recap on the Working at Height Regs 2005**
- **What we all deal with on a regular basis**
  - *Ladders*
  - *Suspended Access Cradles*
  - *MEWPS*
  - *Rope Access*
  - *Emergency Rescue*
- **The Unusual That's Thrown At Us - *Foster v Rogers!!***
  - *hi-tech solutions*
- **The Challenges to EHPs and LAs**
  - *CDM and ALARP?*
  - *partnership working?*
  - *"Height Aware" campaign*



**Each year there are on average....**

- ☠ Falls from Ladders - 515 injuries**
- ☠ Falls from Scaffolding - 150 injuries**
- ☠ Falls from Work Platforms - 120 injuries**
- ☠ Falls from Vehicles - 85 injuries**
- ☠ Falls from Roof Edges - 65 injuries**
- ☠ Falls through Fragile Roofs - 52 injuries**

***“Revitalising Health & Safety” has set a target of reducing the number of fatal & major injury accidents due to Falls from Height by 10% by 2010***

# FALLS FROM HEIGHT 2003/2004

	All falls	Low falls < 2m	Average for all falls 1999 - 2004
<b>Fatal</b>	<b>67</b>	<b>6</b>	<b>65</b>
<b>Major</b>	<b>4340</b>	<b>2330</b>	<b>4865</b>

# FALLS FIGURES FOR 2004/2005

- **53 Fatal injuries (-18%)**
- **3800 Major Injuries (- 3%)**

# COMMON FACTORS IN FALLS

- **Failure by businesses and individuals to recognise the risks**
- **Failure by employers to provide safe systems of work**
- **Failure by management to ensure that safe systems of work are followed**
- **Providing inadequate information, instruction, training or supervision to operatives**
- **Failure by operatives to use appropriate equipment**
- **Failure to provide safe plant / equipment**

## **DRIVERS FOR THE WAH REGS 2005**

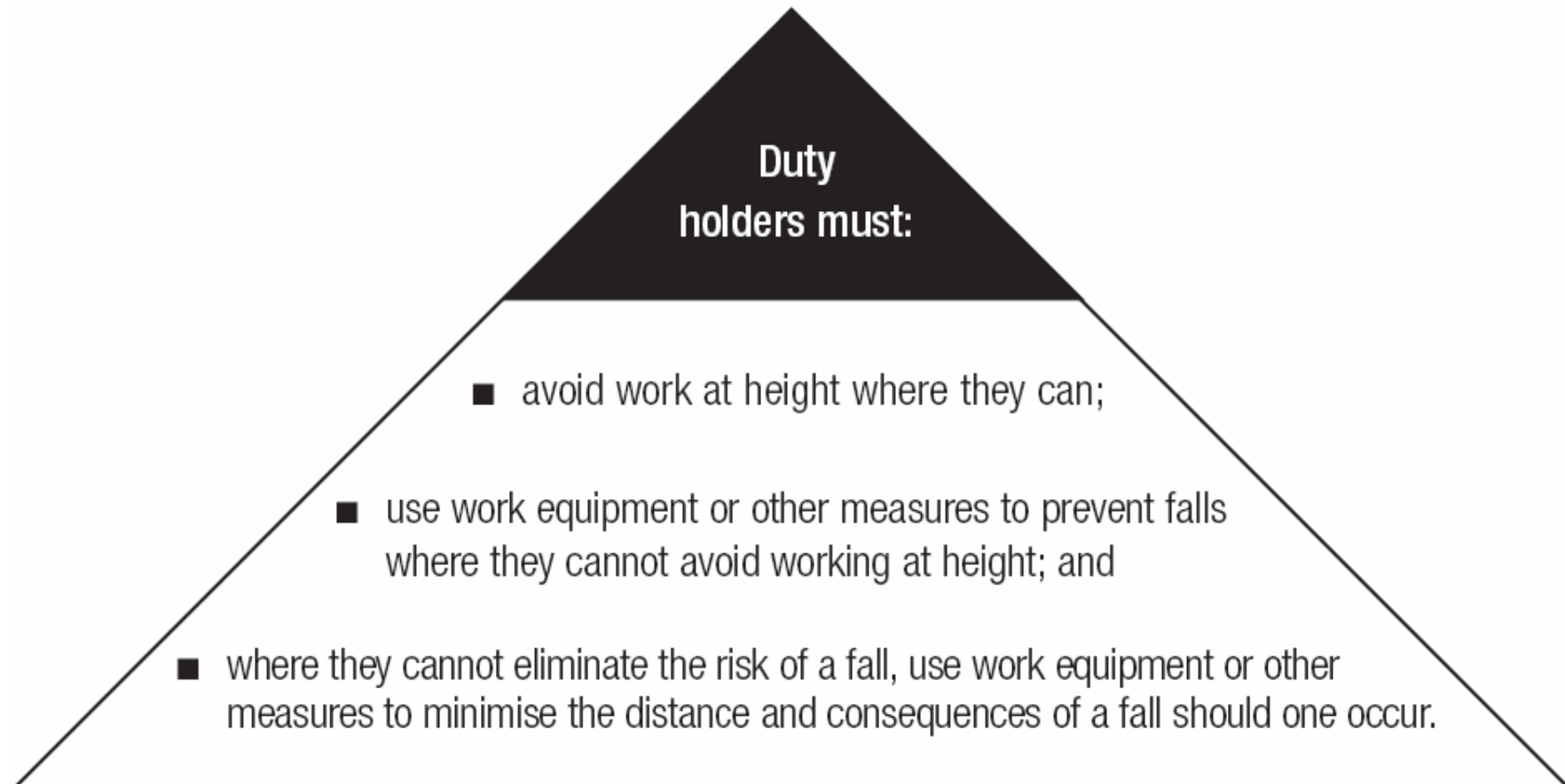
- **Falls are the biggest killer in the workplace**
- **Existing legislation was piecemeal**
- ***Health & Safety Commission* wanted a single set of Regulations**
- **They'd form a centrepiece for the "Falls from Height" Priority Programme**
- **UK needed to implement the EU Directive**



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

# WORKING AT HEIGHTS REGS HIERARCHY OF CONTROL



# WHAT IS 'WORK AT HEIGHT'?

- A place is 'at height' if a person could be injured falling from it, even if it is at or below ground level
- 'Work' includes moving around at a place of work (except by a staircase in a permanent workplace) – e.g. a sales assistant on a stepladder would be working at height
- But does not include...
  - *railway staff standing on train platforms*
  - *actors and musicians performing on a stage*
  - *a lollipop lady/man standing on a kerb*
  - *a mounted police officer(?)*

## WHERE DO THEY APPLY?

- **WAH Regs apply to all work at height where there is a risk of a fall liable to cause personal injury**
  - **They place duties on**
    - *employers*
    - *the self-employed, and*
    - *any person who controls the work of others*
  - **Examples include:-**
    - *Building Owners*
    - *Facilities Managers*
    - *Office Managers*
- who may contract others to work at height to the extent they control their work**

## WHERE DO THEY APPLY? contd.

- The Regulations do **NOT** apply to the provision of paid instruction or leadership in caving or climbing by way of sport, recreation, **team building** or similar adventure activities
- Employees or those working under someone else's control must:
  - *report any safety hazard;*
  - *use the equipment supplied (including all safety devices) properly, following any training and instructions given*



# WAH REGS CREATE TWO KEY PLACES

- **An Existing Safe Place Of Work (ESPOW)**
- **A Work Platform**

# **EXISTING SAFE PLACE OF WORK (ESPOW)**

***“An existing permanent place of work or any temporary place of work and including all access routes, is one which doesn’t require the addition of any further work equipment to prevent a fall from height”***

## **EXAMPLES OF ESPOWs**

- **A non-fragile roof with permanent parapet or guard rail around it**
- **A machine, silo, storage tank, plant, etc. with fixed guard rails and/or a gantry system**
- **A mezzanine warehouse floor with edge protection**
- **Parts of a demolition or construction site where work equipment is not needed to prevent a fall**

# EXISTING SAFE PLACE OF WORK



# EXISTING (UN)SAFE PLACE OF WORK!





**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*



# **UNSAFE PLACE OF WORK**

***- LOW PARAPET WITH FALL ONTO FRAGILE ROOF BELOW***





**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*



# **CREATING SAFE PLACE OF WORK**

## ***- ADDITION OF GUARD RAILS TO AN EXISTING BUILDING***



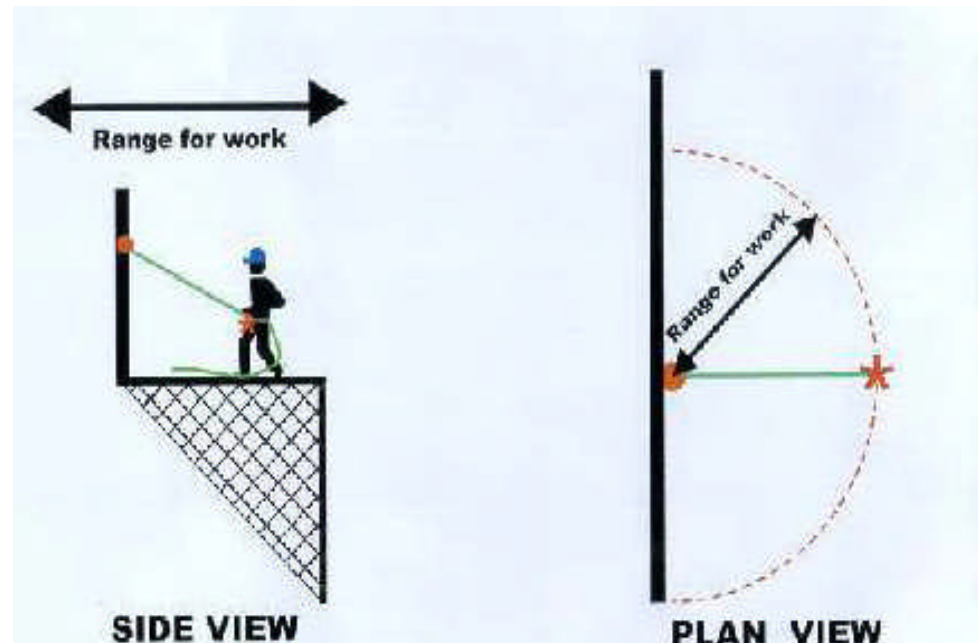
# WORKING PLATFORM

- A suitable surface to work off but.....
- To which are added fall protection measures
- Preferably collective measures – *guarding* - over personal ones - *harnesses*
- Preferably preventative measures – *work restraint* - over fall mitigation – *fall arrest*

# TYPES OF PERSONAL FALL PROTECTION

- **Work Restraint System**

- *an anchorage point and harness which prevents the user going near anywhere they can fall over the edge*





**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

# **TYPES OF PERSONAL FALL PROTECTION** contd.

## ● **Fall Arrest System**

- *anchorage point and harness where the user can fall but is prevented from impacting with ground or surfaced below*



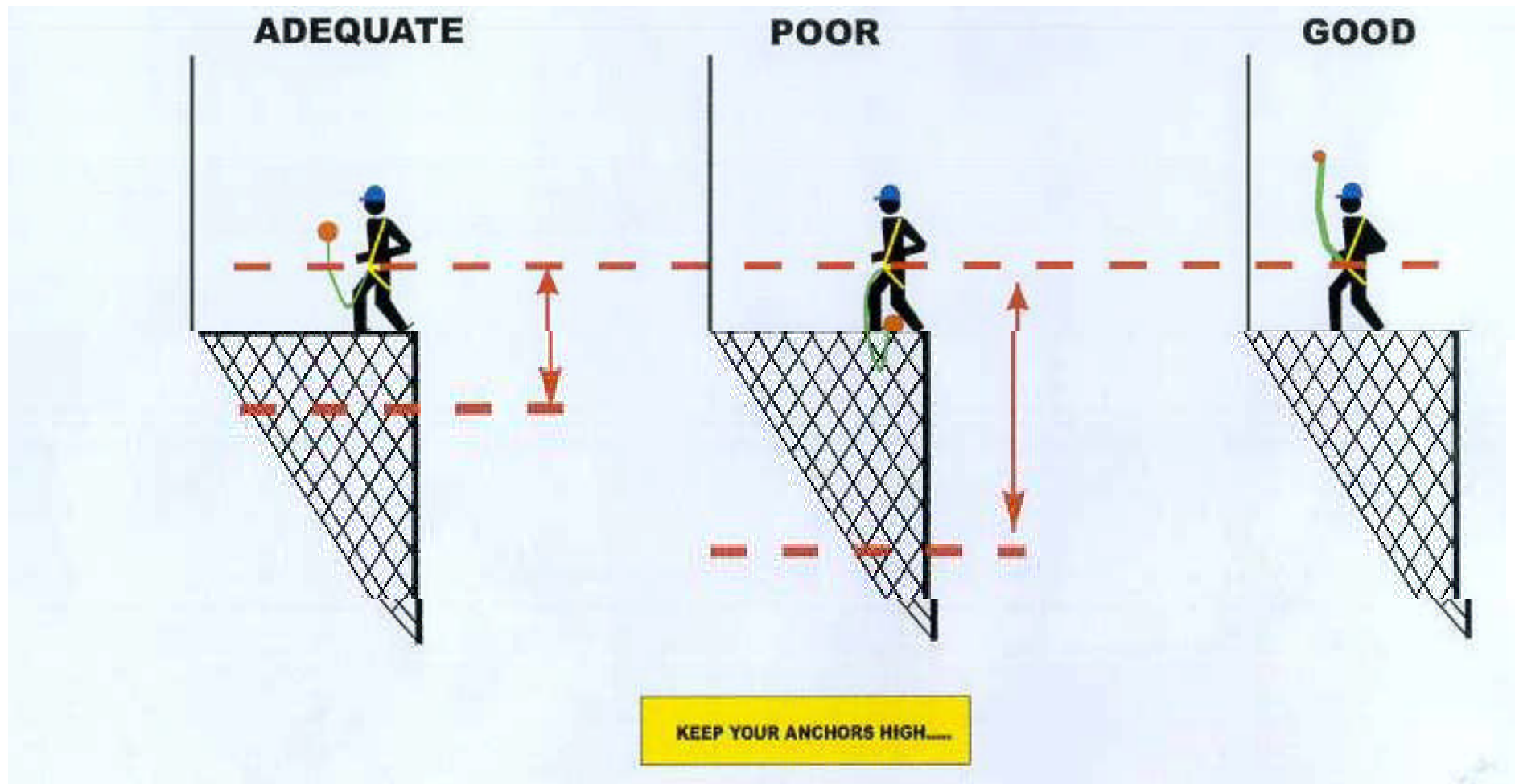


**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*



# CONSIDER SUITABILITY OF FALL ARREST ANCHORAGES



# **EMPLOYERS' RESPONSIBILITIES**

**The WAH Regs require business duty holders to ensure:**

- **all work at height is properly planned and organised;**
- **all work at height takes account of weather conditions that could endanger health and safety;**
- **those involved in work at height are trained and competent;**
- **the place where work at height is done is safe; and**
- **equipment for work at height is appropriately inspected**

# EMPLOYERS' RESPONSIBILITIES CONTD.

All business dutyholders must also ensure that

- the risks from fragile surfaces are properly controlled including appropriate signage;
- the risks from falling objects are properly controlled including barriers beneath; and
- they must plan for emergencies and rescue.



# WHAT ABOUT LOW FALLS?

- Initial pressure from some industry sectors was to retain the existing “more than 2m” rule
- But consultation showed that employers were already concerned about low falls
- *HSC* decided that a risk-based approach and sensible precautions were “reasonable practicable” in all working at height situations
- *WAH Regs* created the opportunity to revisit low falls by reviewing existing risk assessments



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

# **WORKING AT HEIGHT**

*– inappropriate behaviour*





**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*



# **SUMMARY**

## **- THE HIERARCHY OF CONTROL**

### **● AVOID**

- Always work from an Existing Safe Place Of Work*

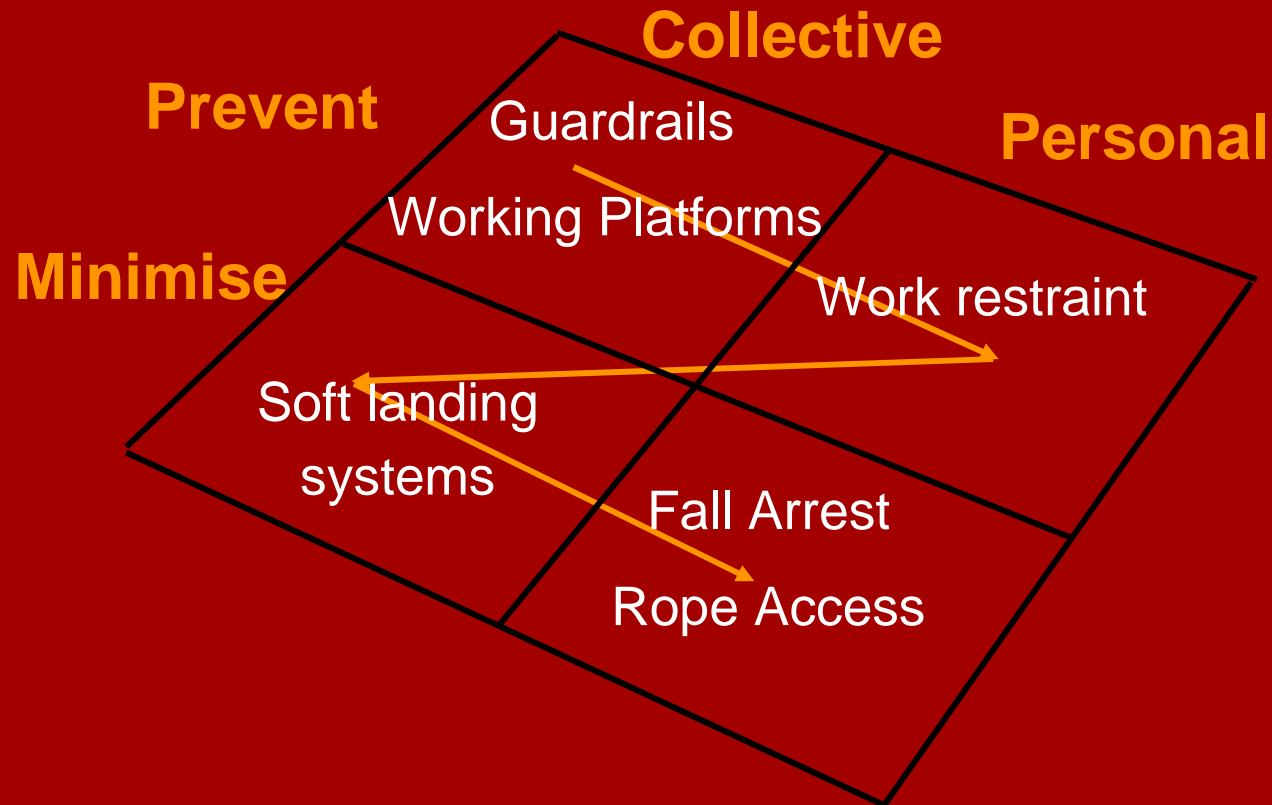
### **● PREVENT**

- deploy Collective measures – temporary barriers / guard rails*
- deploy Personal measures – Work Restraint*

### **● MITIGATE AGAINST the effects of falling**

- use suitable Collective Fall Arrest – e.g. nets and air bags*
- use suitable Personal Fall Arrest – e.g. harnesses*

# Select the right work equipment



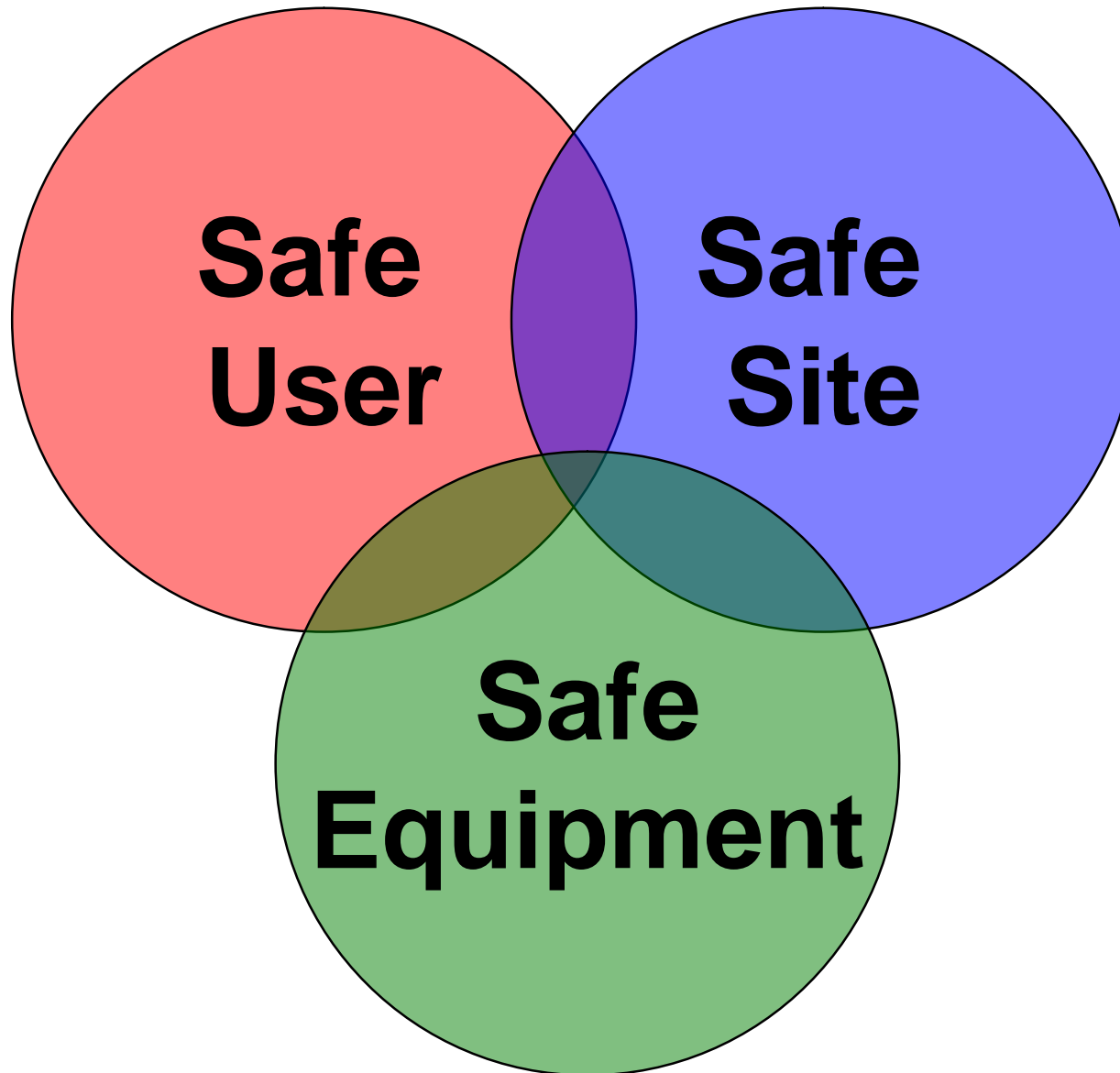
# KEY MESSAGES TO DUTYHOLDERS FROM THE WAH REGS

- Following good practice for work at height now and dutyholders should already be doing enough to comply
- All work at height must be planned, organised and carried out by competent persons
- Follow the hierarchy for managing risks from work at height - take steps to avoid, then prevent or reduce risks
- Choose the right work equipment – go for collective measures first to prevent falls over.....
- Other measures which may only mitigate the distance and consequences of a fall and which may only provide personal protection



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*





**WHAT WE  
ALL DEAL  
WITH ON A  
REGULAR BASIS**



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

# LADDERS

- **Ladders have not been banned!**
- **Ladders & Stepladders may still be used if.....**
- **It can be demonstrated by a Risk Assessment, that the use of other work at height equipment is not justified, because of:**
  - ***the nature of the work***
    - *low risk – one hand only needed for task and low weight (<10kg)*
    - *short duration – up to 30 mins*
  - ***the environment is such that other equipment would create an obstruction***
    - *confined spaces*
    - *passageways*
    - *thoroughfares*

# LADDERS – S.T.E.P.

## ● **S**ite

- *positioning*
- *stabilising*
- *protect other people*
- *weather conditions*

## ● **T**ask - *avoid*

- *base or top of ladder SLIP*
- *ladder FLIP*
- *top of the ladder can LOSE GRIP*
- *stepladders TIPPING*

# LADDERS – S.T.E.P.

## ● **E**quipment

- *correct class*
- *material*
- *height*
- *type*

## ● **P**erson

- *competent*
- *able*
- *sufficient nos.*
- *PPE*

## STABILITY PRINCIPLES

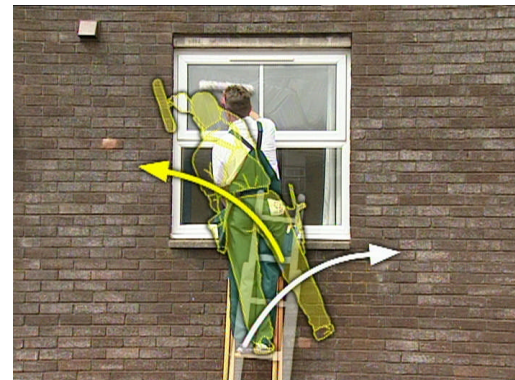
### LADDERS

- Tie
  - *anchor point*
  - *structure*
- Top and bottom stability devices
- Wedge against object
  - *wall*
  - *vehicle*
- Foot
- Keep navel within stiles
- Avoid
  - *side slopes over 16°*
  - *back slopes over 6°*



### STEPLADDERS

- Avoid wobbles
  - *uneven surfaces*
  - *missing feet*
- Avoid side-on working
- Do not overload
- Use commercial grade



# **SUSPENDED ACCESS EQUIPMENT/ BUILDING MAINTENANCE UNITS**

- **SAE / BMUs are still the preferred method for high-level window cleaning and façade maintenance**
- **Lots of equipment up there is now over 20 years old**
- **Growing increasingly more complex to maintain and service on modern buildings**
- **Too often “bolted on” to projects by architects as an afterthought**



**CITY OF LONDON**

*High quality services for the City, for London and for the country as a whole*

## **SUSPENDED ACCESS EQUIPMENT/ BUILDING MAINTENANCE UNITS** CONTD.

- **Must be supplied in accordance with the *Supply of Machinery (Safety) Regs 1992* and comply with the Essential Health & Safety Requirement – *HSE only enforced***
- **Must have a First Through Examination as its correct installation is safety critical**
- **This includes any hidden runways, supports, tracks, mountings BEFORE they're covered over or enclosed**
- **Must be “Thoroughly Examined”, normally in accordance *SAFed's LG3***



# **SUSPENDED ACCESS EQUIPMENT/ BUILDING MAINTENANCE UNITS** CONTD.

- **Owners who provide equipment**
  - *must carry out their own Risk Assessment for its safe use*
  - *must provide this and all other necessary information on its use to all users - Maintenance, Engineer Surveyors, Cleaners*
- **Only then can these users carry out their own site specific RAs and draw up Method Statements**
- **No generics - each site is unique so site specific Risk Assessments must be available for informing the creation of Method Statements**

# **SUSPENDED ACCESS EQUIPMENT/ BUILDING MAINTENANCE UNITS** CONTD.

- **Must be accessed from a place of safety**
  - *ideally attach on from roof and climb in or drive out of garage area to use*
  - *but supervision of users?*
- **Not used regularly so exposed to elements and deterioration**
- **Try to use for multifunction when not suitable**
  - *mastic renewal*
  - *glazing replacement?*
  - *carry too much water?*

# TEMPORARILY RIGGED

- **As per SACs / BMUs but rigged on the day**
- **Smaller units often maybe only one person**
- **Reliant upon competence of those doing the rigging**
- **Operatives often need to be present for competent person to carry out the Thorough Examination**
- **All very varied, often bespoke to each individual site including internal use in atria**

# MEWPS

- Usually hired in for the day / weekend / event but some sites have their own
- Not too much of an issue unless specialist, bespoke equipment involved
- Users need to be properly trained – e.g. *IPAF ticket as per construction industry*
- Possible increased use for smaller, lower level tasks as the Working At Height Regulations 2005 begin to bite?

# ROPE ACCESS

- **Rope access seen as an easy (kop out?) option by some architects**
- **A legitimate means of access for certain activities – e.g. window cleaning and light maintenance**
- **Must be trained operatives working in a team**
- **Permit-to-work system to ensure only trained staff on site**
- **Often done outside of normal working hours so “invisible” to enforcement**
- **Reliance upon good management of contractors by client side**

# EMERGENCY RESCUE

- **Cannot rely upon the emergency services**
  - *urban areas have traffic issues*
  - *rural have greater distances to cover*
- **Need to have in place good, tried, safe systems of recovering employees who may be unconscious**
- **Buddy working, NOT lone working**
- **Radios essential for site coverage**
- **Devices for reeling people in who have fallen**
- **Consider WAH principle of “restraint” before “arrest”**



# THE UNUSUAL

- **Anything Foster or Rogers build!!**
- **Computer controlled systems**
- **Built on MEWPs – Swiss Re**
- **Hi-tech maintenance required**
- **Automatics?**

# THE CHALLENGES FOR EHPs AND LAs

- Influencing our Town Planning colleagues
- Educating clients and end-users
- A.L.A.R.P. policy - great on paper but.....
- CDM enforcement – *do HSE really do it with respect to design?*
- Partnership working with HSE Construction Division?
- Is flexible warranting a way in for LA EHPs?

- Risk management home
- Who we are

---

- FAQs
- Practical guide to risk assessment
- Case studies
- Publications

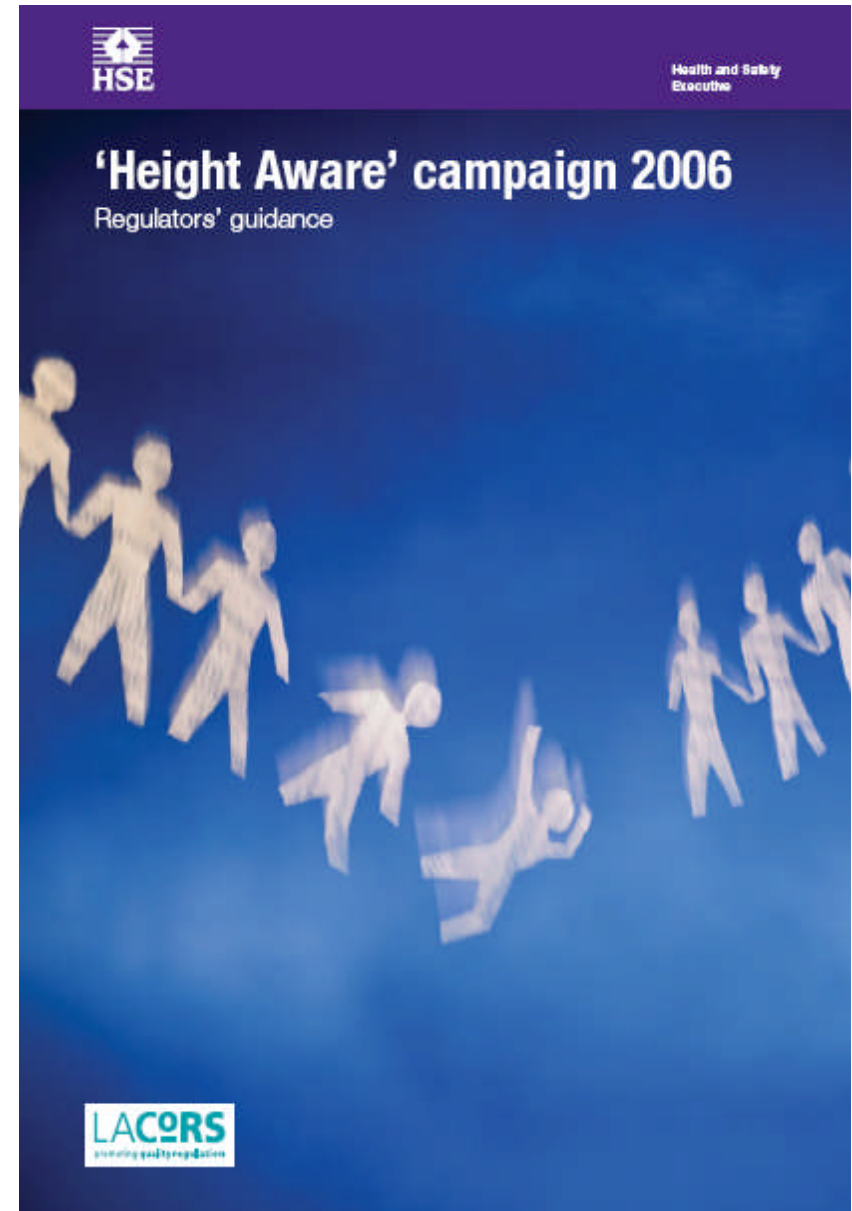
## ALARP Suite of Guidance

With these six pieces of guidance HSE is addressing its own staff, explaining the concept 'reasonably practicable' and providing guidance about what they should expect to see in dutyholders demonstrations that the risk has been reduced 'as low as reasonably practicable'(ALARP).

- ▶ **Assessing compliance with the law in individual cases and the use of good practice**
- ▶ **Policy and Guidance on reducing risks as low as reasonably practicable in Design**
- ▶ **Principles and guidelines to assist HSE in its judgements that duty-holders have reduced risk as low as reasonably practicable**
- ▶ **HSE principles for Cost Benefit Analysis (CBA) in support of ALARP decisions**
- ▶ **Cost Benefit Analysis (CBA) Checklist**
- ▶ **ALARP "at a glance"**

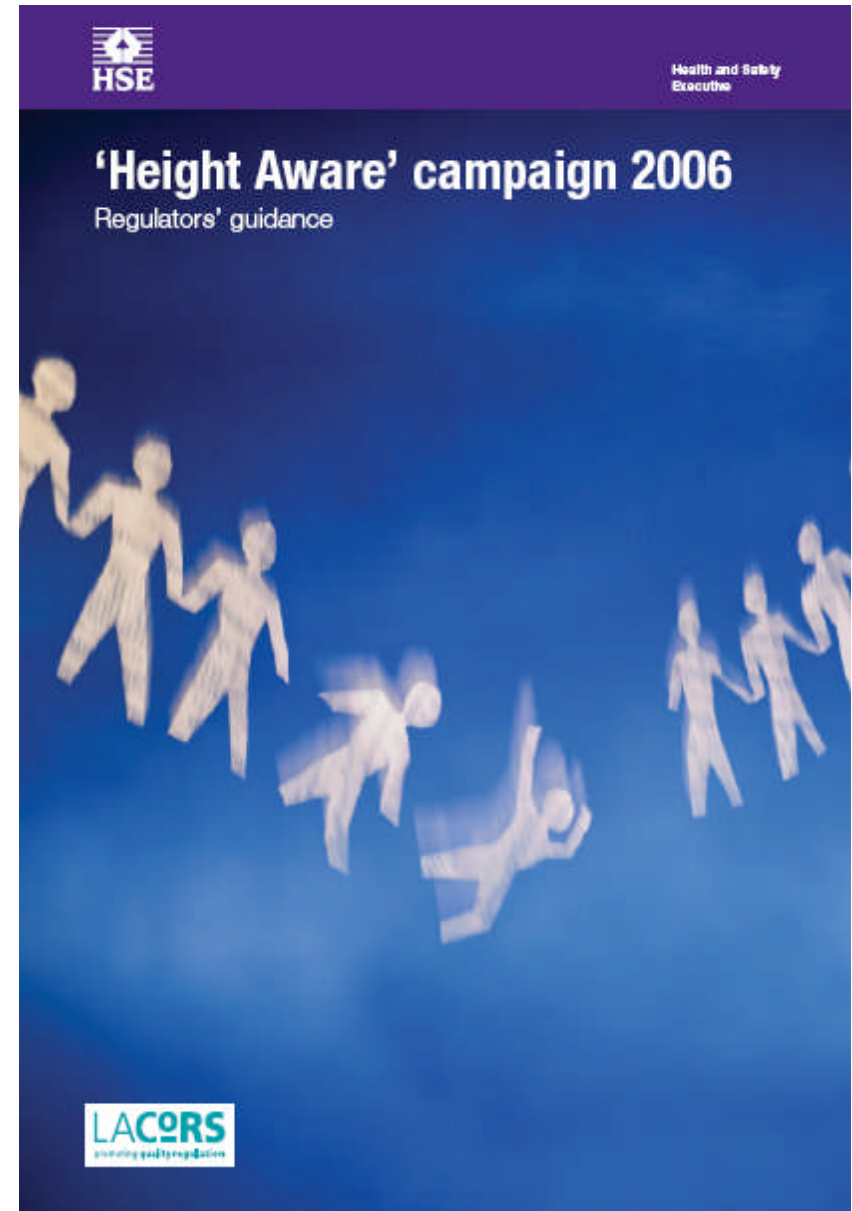
## ‘HEIGHT AWARE’ 2006

- Aimed at Building Maintenance and Facilities Managers
- Simple messages
- Launched on May 10 at *Access Industry Forum Conference* by Lord Hunt
- Inspection period 22 May to 30 June



# **‘HEIGHT AWARE’ 2006 - KEY MESSAGES**

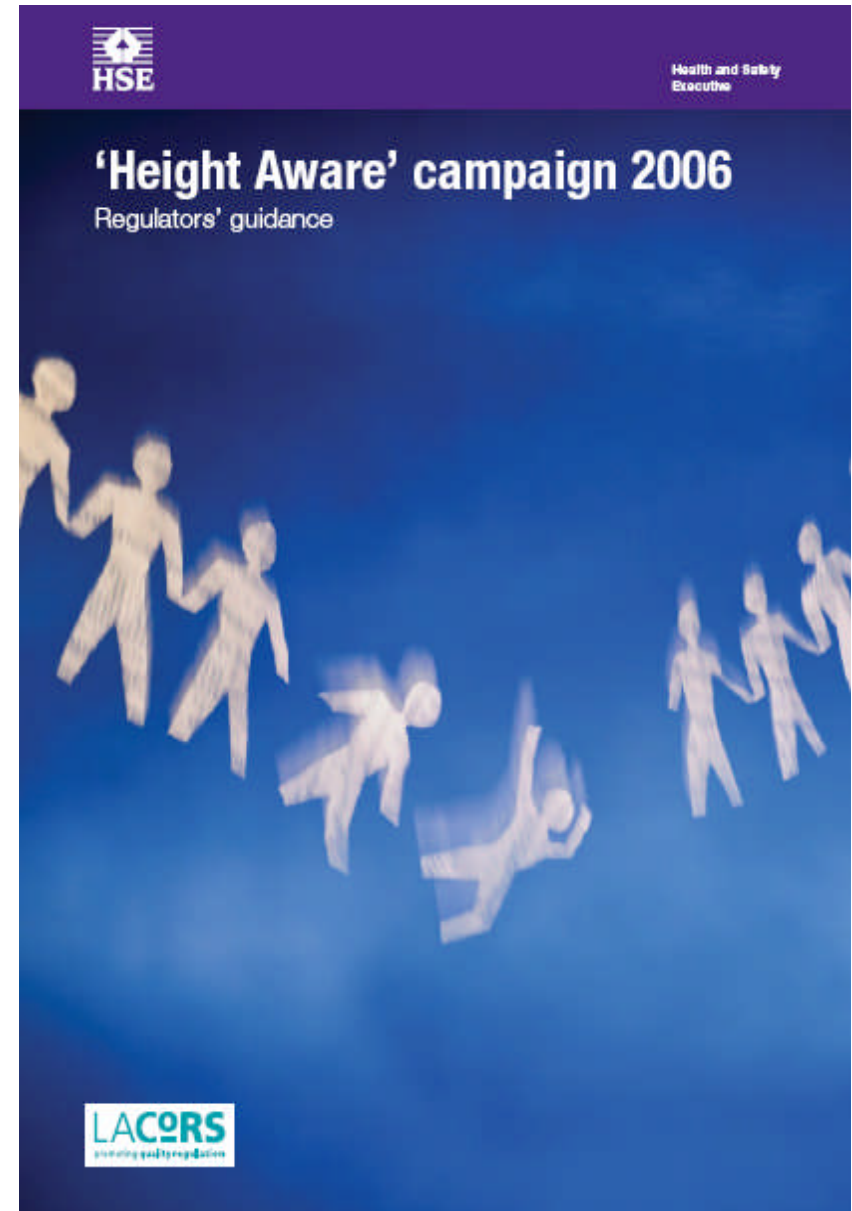
- **Identify activities involving work at height and avoid them if possible**
- **Plan work, assess the risks and identify suitable precautions**
- **Select the most appropriate equipment and people**
- **Train people how to use the equipment properly**
- **Inspect and maintain all equipment regularly**
- **Supervise and monitor to make sure work is done safely**



# **‘HEIGHT AWARE’ 2006**

## **– 3 ELEMENTS**

- **Publicity & media campaigns**
- **Educational and Promotional Events**
- **Targeted Inspections by HSE and LAs**



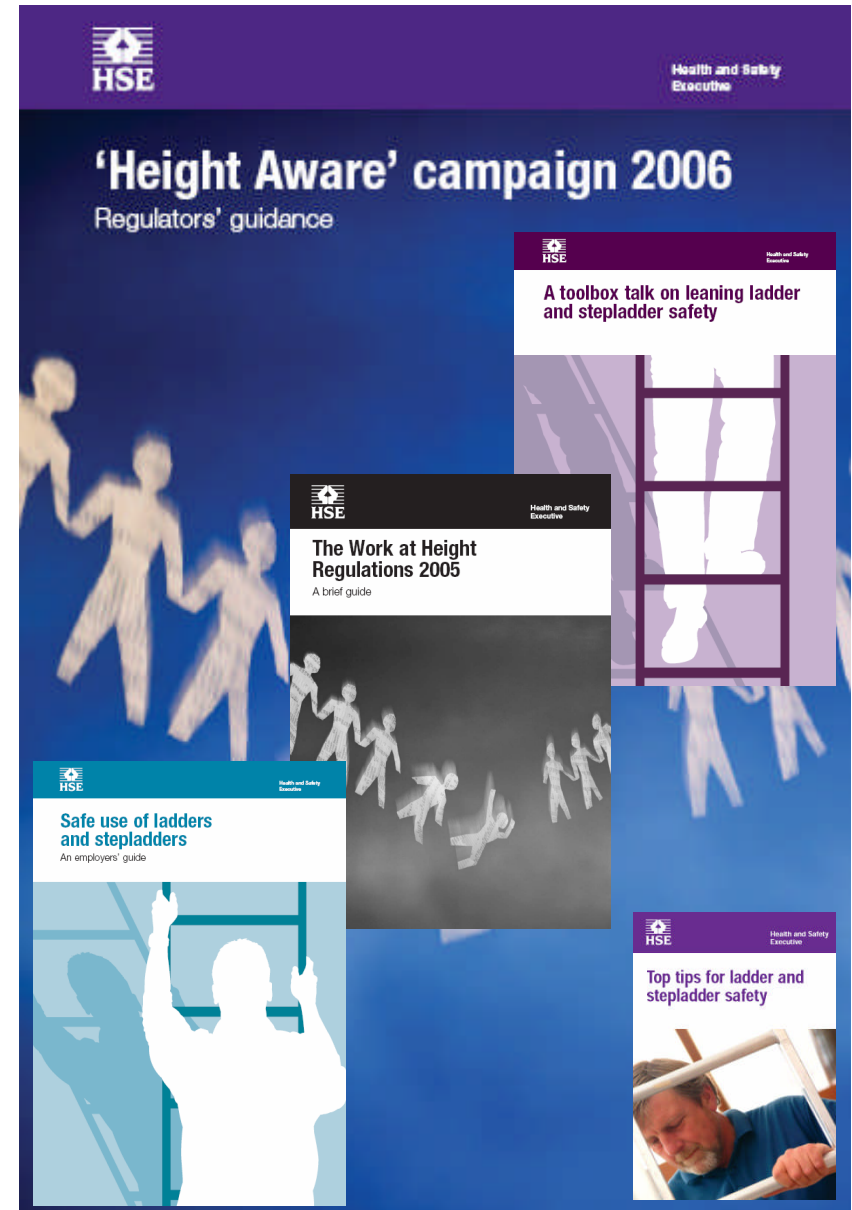


# CITY OF LONDON

High quality services for the City, for London and for the country as a whole

## 'HEIGHT AWARE' 2006 THE INFO PACK

- Information sheets covering key points about planning work at height, selecting appropriate equipment and how to select and manage contractors
- 'Safe use of ladders and stepladders - an employers' guide' guidance booklet
- 'Top tips for ladder and stepladder safety' pocket card
- 'The Work at Height Regulations 2005 – a brief guide' leaflet
- Toolbox talk on leaning ladder and stepladder safety with supporting PowerPoint presentation;
- CIS10 Tower Scaffolds;
- MISC 614 preventing falls from boom type MEWPS; and
- A video called 'Safe access for maintenance'





# ***FOR FURTHER ADVICE OR INFORMATION***

 ***020 7332 3630***

 ***[www.cityoflondon.gov.uk](http://www.cityoflondon.gov.uk)***

 ***[DES.GeneralEnq@cityoflondon.gov.uk](mailto:DES.GeneralEnq@cityoflondon.gov.uk)***