

# HEALTH AND SAFETY

FOR RICS APC CANDIDATES

BY

PRIYANKA NUWAN KARUNARATNA

BSc MSc APAEWE MRICS ICIQB



13 JANUARY 2017

# HEALTH AND SAFETY

## FOR RICS APC CANDIDATES



Introduction (10 minutes)

Personal and corporate responsibility for property professionals (10 minutes)

Legal considerations and duties (20 minutes)

Assessing hazards and risk (15 minutes)

Property professionals' places of work (5 minutes)

Occupational health (30 minutes)

Visiting premises and sites ( 5 minutes)

Procurement and management of contractors and construction work ( 5 minutes)

Modern safety measures (10 minutes)

Q & A (10 minutes)

# What does RICS expect from you ?

**Level 1** – knowledge and understanding

**Level 2** – application of knowledge and understanding

**Level 3** – reasoned advice and depth of technical knowledge

The competencies are in three distinct categories:

**Mandatory competencies** – the personal, interpersonal, professional practice and business competencies common to all pathways and compulsory for all candidates.

**Core competencies** – the primary competencies of your chosen APC pathway.

**Optional competencies** – a set of competencies selected by the candidate from a list defined for the particular pathway. In most cases there is an element of choice. These are mostly technical competencies, but certain mandatory competencies also appear on the optional competency list and candidates are permitted to select one of these at a higher level.



## Mandatory competencies

You must achieve the minimum levels as set out in the mandatory competencies.

### Level 3

- Conduct rules, ethics and professional practice

### Level 2

- Client care
- Communication and negotiation
- Health and safety

### Level 1

- Accounting principles and procedures
- Business planning
- Conflict avoidance, management and dispute resolution procedures
- Data management
- Sustainability
- Team working

# What does RICS expect from you?

Title	Definition	Level required
Health and safety	<p><b>Level 1</b> Demonstrate knowledge and understanding of the principles and responsibilities imposed by law, codes of practice and other regulations appropriate to your area of practice.</p> <p><b>Level 2</b> Provide evidence of practical application of health and safety issues and the requirements for compliance, in your area of practice.</p>	2

## Level 1

Principles and responsibilities imposed by law

Codes of practice

Other regulations appropriate to your area of practice

## Level 2

Practical application of health and safety issues

Requirements for compliance

# What does RICS expect from you?

## Health and safety

### Level 2

Personal health and safety at work – RICS publication 'Surveying Safely' Personal safety procedures when visiting a construction site Common health and safety risks in construction Health and safety legislation:

- Generally
- At work
- Construction specific
- Sector specific
- Client specific
- Asbestos and other hazardous materials

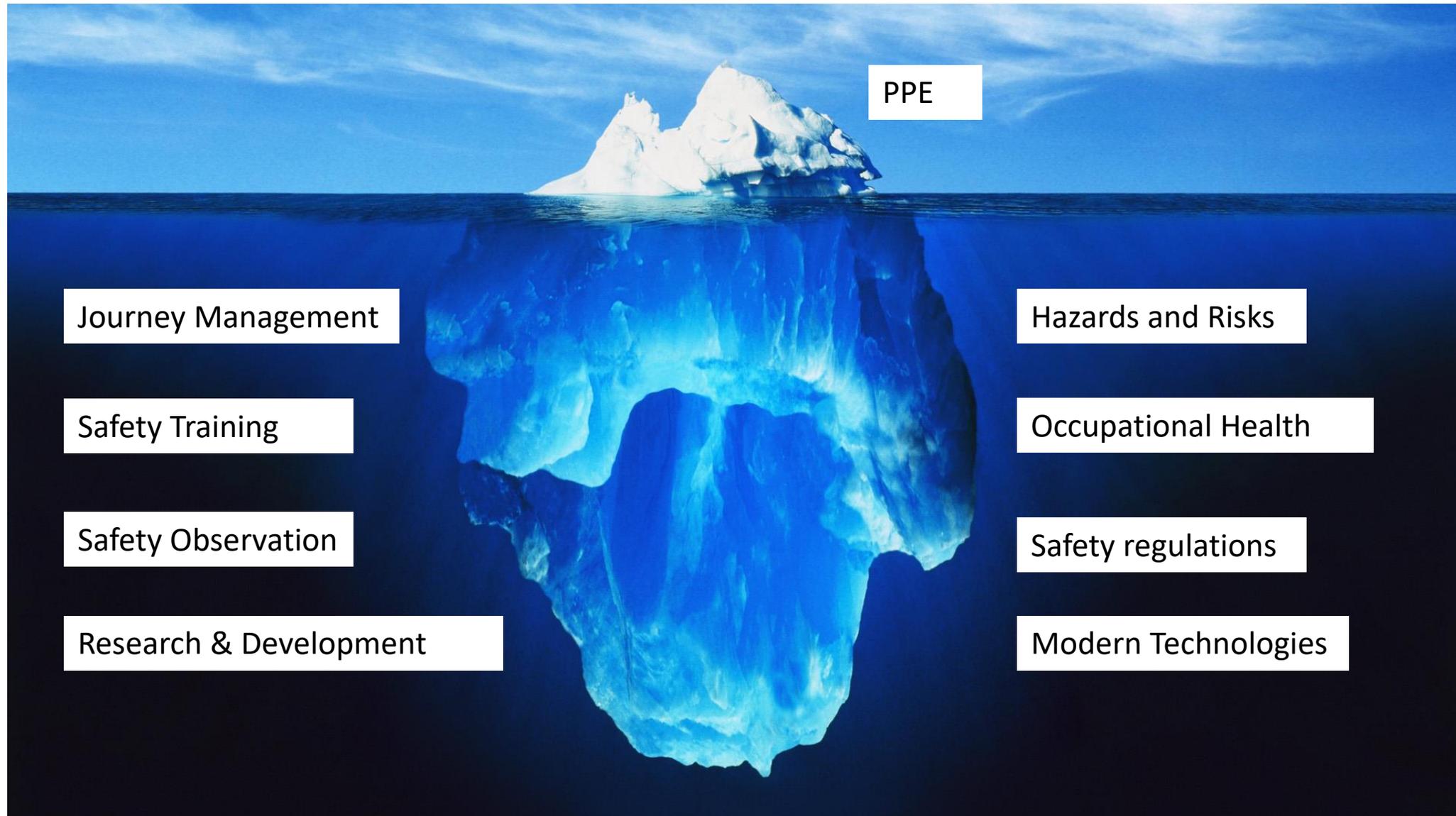
# ABBREVIATIONS

- ACoP Approved Code of Practice
- CBI Confederation of British Industry
- CDM Construction (Design and Management) Regulations 2007
- COSHH Control of Substances Hazardous to Health Regulations 2002
- CPS Crown Prosecution Service
- DSE Health and Safety (Display Screen Equipment) Regulations 1992
- HSCER Health and Safety (Consultation with Employees) Regulations 1996
- HSWA Health and Safety at Work etc. Act 1974
- LOLER Lifting Operations and Lifting Equipment Regulations 1998
- MHSWR Management of Health and Safety at Work Regulations 1999
- PPER Personal Protective Equipment Regulations 1992
- PUWER Provision and Use of Work Equipment Regulations 1998
- RIDDOR Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
- SRSCR Safety Representatives and Safety Committees Regulations 1977 TUC Trades Union Congress

# Does Health and Safety Mean ONLY PPE?



# Does Health and Safety Mean only PPE? **NO**



PPE

Journey Management

Safety Training

Safety Observation

Research & Development

Hazards and Risks

Occupational Health

Safety regulations

Modern Technologies

# What are the Personal Protective Equipment (PPE)

- Head protection (helmets, hard hats)
- Hearing protection (ear plugs)
- Eye and face protection (safety glasses, masks)
- Respiratory protection (dust masks)
- Hand protection (gloves)
- Protective clothing (coveralls)
- Foot protection (safety boots)
- Safety belts and life lines
- Safety nets

In certain circumstances any of the following equipment may be necessary (refer also to the *Personal Protective Equipment Regulations 1992* (PPE)):

- + gloves
- + respirator or face mask
- + safety helmet
- + ear defenders
- + eye protection
- + boots
- + high visibility clothing
- + temporary/task lighting.



## Surveying safely

Your guide to personal safety at work

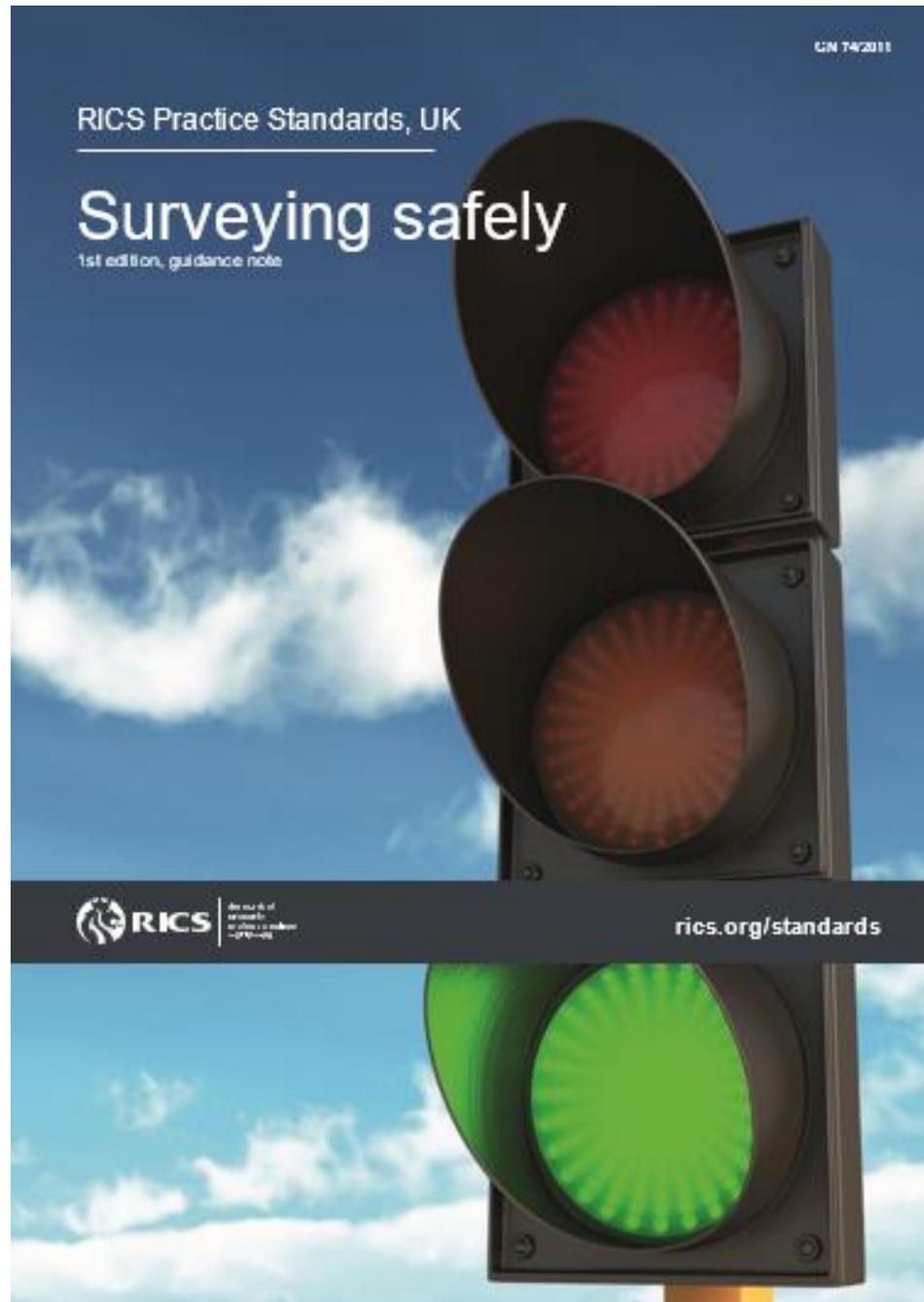
August 2006 Issue 02

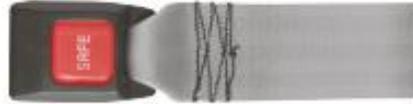


RICS Practice Standards, UK

## Surveying safely

1st edition, guidance note





## Contents

1. General statement of employers' and employees' duties	4
2. Safety of employees	4
3. Your workplace	5
4. Identifying hazards and undertaking risk assessments	5
5. Before visiting premises/sites	6
6. Arrival and during visits to premises/sites	7
7. Safety of yourself and others	9
8. Your legal duties	9
9. Case studies	10
10. The Bilbao Declaration	11
11. For more information	11
12. The Mind Map	12

## Introduction

- 1 Personal and corporate responsibility for property professionals
- 2 Legal considerations and duties
- 3 Assessing hazards and risk
- 4 Property professionals' places of work
- 5 Occupational health
- 6 Visiting premises and sites
- 7 Procurement and management of contractors and construction work

# 1. Personal and corporate responsibility for property professionals

## Personal (CART)

Co-operation with their employer to minimise risk to the health and safety of themselves, their colleagues and all others potentially affected by the activities they undertake

Acceptance of their individual responsibility and personal role in addressing health and safety risk management and their responsibility to abide by corporate and legal requirements

Reporting, in good time where possible, any breaches of health and safety rules and regulations or

any actual, potential or perceived health and safety risks, to persons best placed to address them

Taking the time to address the management of health and safety within the area of their experience and competence, and within the remit of their management responsibilities, and + maintaining adequate and appropriate competence in regard to health and safety matters associated with their activities at work

# 1. Personal and corporate responsibility for property professionals

## Corporate (SAPTIP)

Corporate Structures to manage health and safety

Clear lines of Accountability for the management of health and safety

Policies and procedures appropriate to the work undertaken

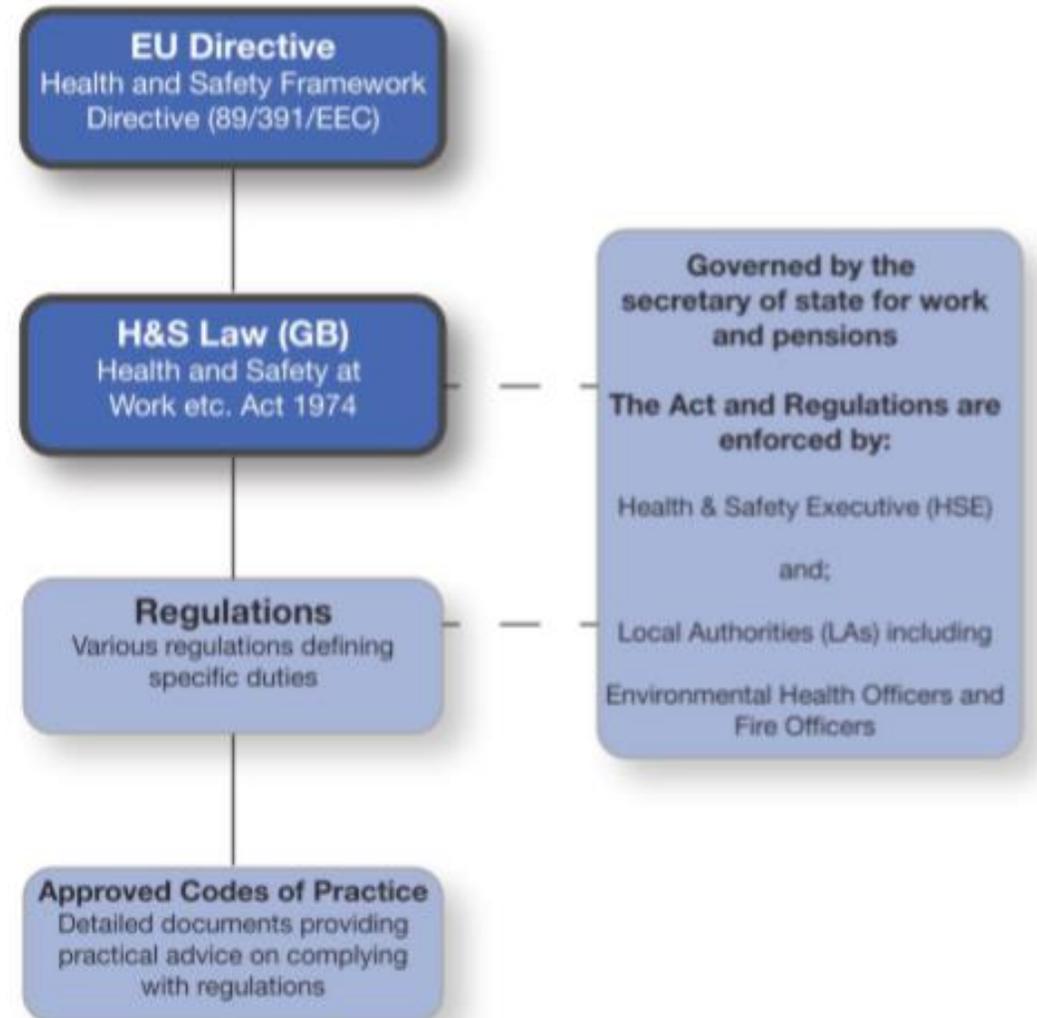
Identification and management of foreseeable risks

Training and information in regard to the management of health and safety

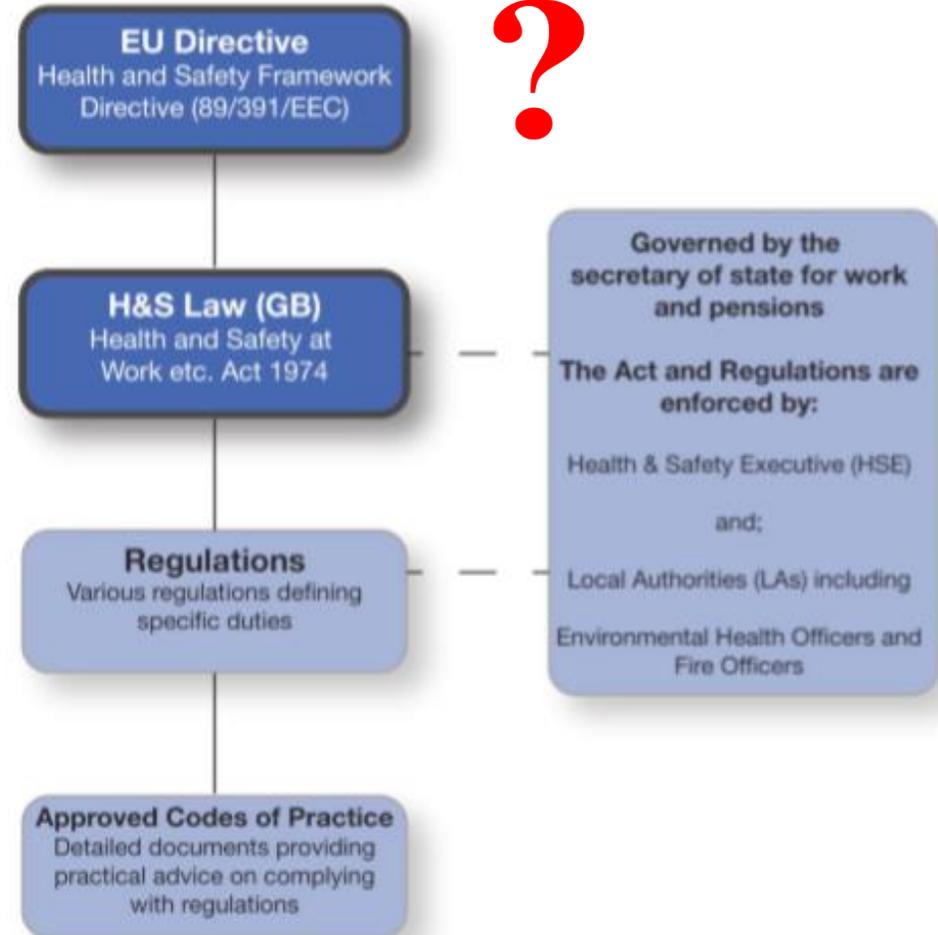
Processes to manage contractors, procurement of/provision of services from/to others, and

Appropriate Insurances (which may include Casualty Insurance, known in the UK as Employer's Liability and Public Liability insurance).

## 2. Legal considerations and duties (UK perspective till 23 June 2016)



## 2. Legal considerations and duties (likely UK perspective after 23 June 2016)



## 2. Legal considerations and duties- UK Perspective

- Health and Safety at work, etc. Act 1974- Aims to ensure, so far as is reasonably practicable, that the health, safety and welfare of employees, and of persons not in their employment, is not put at risk. This includes providing and maintaining equipment, having safe systems of work, and ensuring that premises are safe.
- Construction Design Management regulations 2007 (CDM)- Aimed at improving overall management and coordination of health, safety and welfare throughout all stages of a construction project
- Disability Discrimination Act 1995 (DDA) and Disability Rights Commission Act 1999- This requires anyone providing a service from their building and receiving visitors, to suitably provide for people with disabilities
- Management of Health and Safety at Work regulations 1999-Control of Substances Hazardous to Health regulations 2002- Aimed to avoid workplace diseases through controlling inhalation, ingestion and absorption of hazardous materials
- Control of asbestos regulations 2006- Aimed at prohibition of importation, supply and use of all forms of asbestos. Existing asbestos condition monitored and managed to ensure that they are not disturbed.

## Regulation of Occupational Safety and Health for Establishments Governed by the Labour Law of Sultanate of Oman

In 2008, the Ministry of Manpower issued Ministerial Decision no. 286/2008 introducing the Regulation of Occupational Safety and Health for Establishments Governed by the Labour Law. The Regulation provides for a comprehensive regulatory framework with the aim of improving health and safety standards in the workplace and protecting workers from various occupational hazards. The Regulation consists of 43 Articles covering a wide range of issues including: lighting, ventilation, heat stress, noise, uniforms, personal protection equipment, first aid and occupational diseases.

In general, the workplace must support good health by promoting healthy food and physical activity in the workplace, prohibiting smoking in the workplace, and enhancing psychological health and social integration of workers.

# Regulation of Occupational Safety and Health for Establishments Governed by the Labour Law of Sultanate of Oman

## Workplace Safety Issues

According to Article 15, the employer must take all necessary actions to provide adequate protection for the workers' safety while at the workplace.

1. Work uniform and equipment for personal protection must comply with the specified standards of safety required depending on the actual hazards the workers are being exposed to. The employer should train the workers on the best ways of using, maintaining and storing such equipment. Prominent signs in the relevant languages need to be posted in all hazardous areas where entry is prohibited without using personal protection equipment.
2. Most importantly, workers must not work on construction sites or open uncovered areas of high temperature at noon, from 12:30pm up to 3:30pm throughout June, July and August; subject to certain exemptions for establishments providing essential public services.
3. In dealing with the various hazards in the workplace, the Regulation provides a list of measures which employers need to implement to minimise occupational accidents and the exposure to various risks and hazards including: fire, mechanical and electrical risks, chemical hazards, heavy duty machinery, workers' transport vehicles, in addition to risks of harmful rays, occupational cancer and asbestos.

# Regulation of Occupational Safety and Health for Establishments Governed by the Labour Law of Sultanate of Oman

## Workplace Safety Issues (Cont'd)

According to Article 15, the employer must take all necessary actions to provide adequate protection for the workers' safety while at the workplace.

4. The employer must provide sufficient, adequate, natural or artificial lighting, distributed in the workplace equally, free from direct or reflective rays, in addition to a system of emergency lighting in case of the failure of the normal lighting. The lighting system must clearly show emergency exits so that the workers can locate and use them. The position of fire alarms and fire extinguishers must be clearly indicated.

5. Polluted air shall be avoided by providing a natural or artificial ventilation system that provides fresh air in the workplace and use local ventilation where sources of pollutions exist. This system must effectively suck the polluted air out. The Regulation also specifies the minimum percentage of oxygen, speed of air, and the maximum degree of relative humidity in the workplace.

6. To protect the workers from exposure to noise, noisy operations that exceed the permissible levels must be isolated away from the workers, or sound insulated rooms should be used. Additionally, insulating, absorbing or reflective equipment should be installed on noisy machines.

# Regulation of Occupational Safety and Health for Establishments Governed by the Labour Law of Sultanate of Oman

## Food and Water

The employer must also provide workers with sufficient potable water within easy reach and a reasonable number of water coolers proportionate to the number of workers. Bacterial analysis of the groundwater shall be carried out once every six months and chemical testing once every year in one of the government laboratories.

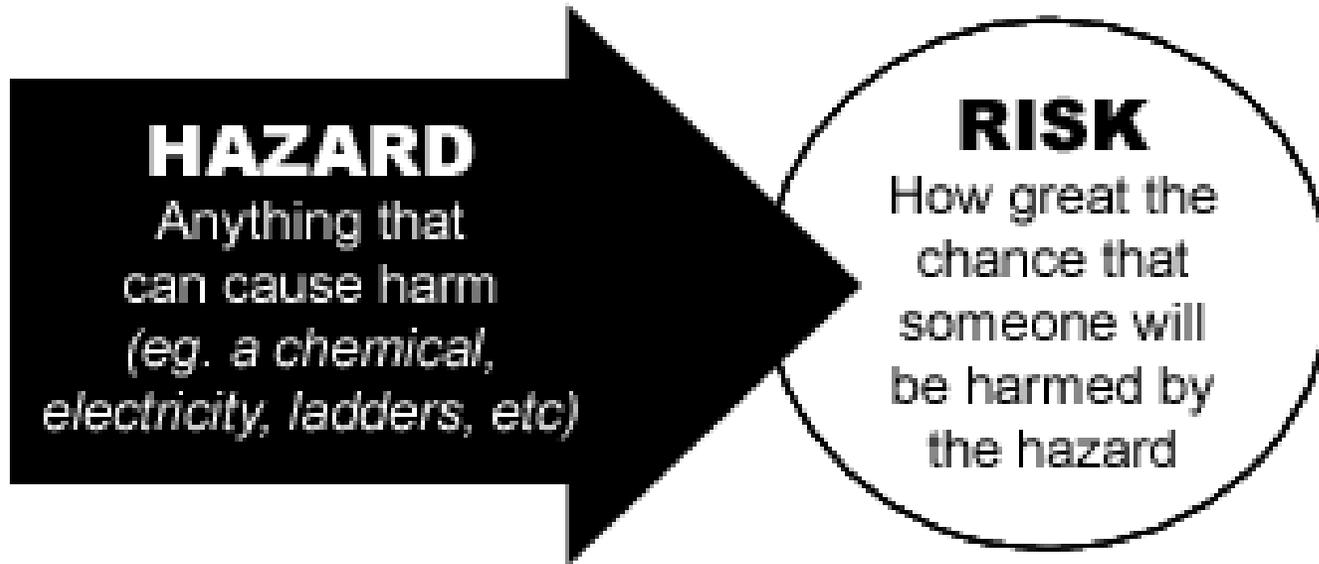
If food is provided for workers, employers should ensure that food safety measures are strictly observed. A separate place for cooking shall be provided and food serving places must be equipped with hand-washing facilities.

## Women's Safety Issues

The Regulation also deals with specific health and safety needs related to women and people with special needs. Employers, for instance, must not expose women to materials or occupational practices which could adversely impact on the safe delivery of children or the health and safety of the foetus.

### 3. Assessing hazards and risk

- Hazard- something with a potential to cause harm to someone
- Risk- likelihood (whether high or low) of harm being caused



## Common hazards in workplace

- frayed electrical cords,
- unguarded machinery,
- exposed moving parts,
- constant loud noise,
- vibrations,
- working from ladders,
- scaffolding or heights,
- spills,
- tripping hazards.



# Five Steps Risk Assessment (IDERR)

- Identify the hazards
- Decide who might be harmed and how
- Evaluate the risks and decide on precautions
- Record your findings and implement them
- Review your assessment and update if necessary.

# Risk Assessment Matrix

Severity of outcome ↑	High	3	3	6	9
	Medium	2	2	4	6
	Low	1	1	2	3
			1	2	3
			Low	Medium	High
			Likelihood of occurrence →		

## 4. Property professionals' places of work

- Residential properties/estates
- Remote field/moorland
- Construction/demolition/refurbishment sites
- Industrial sites
- Shopping centres
- Leisure centres
- Quarries or other mineral works
- Near or over water
- Roads
- Airfields
- oil or other drilling rigs.

# 5. Occupational Health

What is occupational health?

Occupational health is the promotion and maintenance of physical and mental well-being of all staff

What is well-being?

Well-being is the state of being healthy comfortable and happy

- The first element is about how you occupy your time or simply liking what you do every day: your **Career Wellbeing**.
- The second element is about having strong relationships and love in your life: your **Social Wellbeing**.
- The third element is about effectively managing your economic life: your **Financial Wellbeing**.
- The fourth element is about having good health and enough energy to get things done on a daily basis: your **Physical Wellbeing**.
- The fifth element is about the sense of engagement you have with the area where you live: your **Community Wellbeing**.

# Elements of Occupational Health

- Stress
- violence, bullying and harassment
- alcohol and drug misuse
- manual handling
- Repetitive Strain Injuries (RSIs)
- Noise
- Asbestos
- hazardous substances
- Diseases
- Biosecurity
- new and expectant mothers
- sun protection
- environmental factors
- health monitoring and health surveillance

# Elements of Occupational Health- Bullying

Bullying at work can take many forms. It can involve:

- ignoring or excluding someone
- spreading malicious rumours or gossip
- humiliating someone in public
- giving someone unachievable or meaningless tasks
- constantly undervaluing someone's work performance
- cyber nuisance.



## Elements of Occupational Health- Asbestos

Asbestos is a naturally occurring rock mineral which has heat and fire resisting properties, tensile strength and insulating properties. It was used extensively in a wide range of building materials until 1985 (1999 for chrysotile asbestos) when its use in Great Britain was banned. Figure 6 shows typical locations of asbestos containing materials in a building



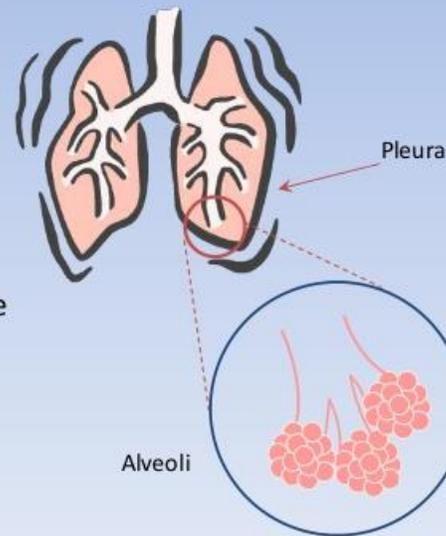
# Elements of Occupational Health- Asbestos

©Asbestos.com

## Asbestos is an Inhalation Hazard

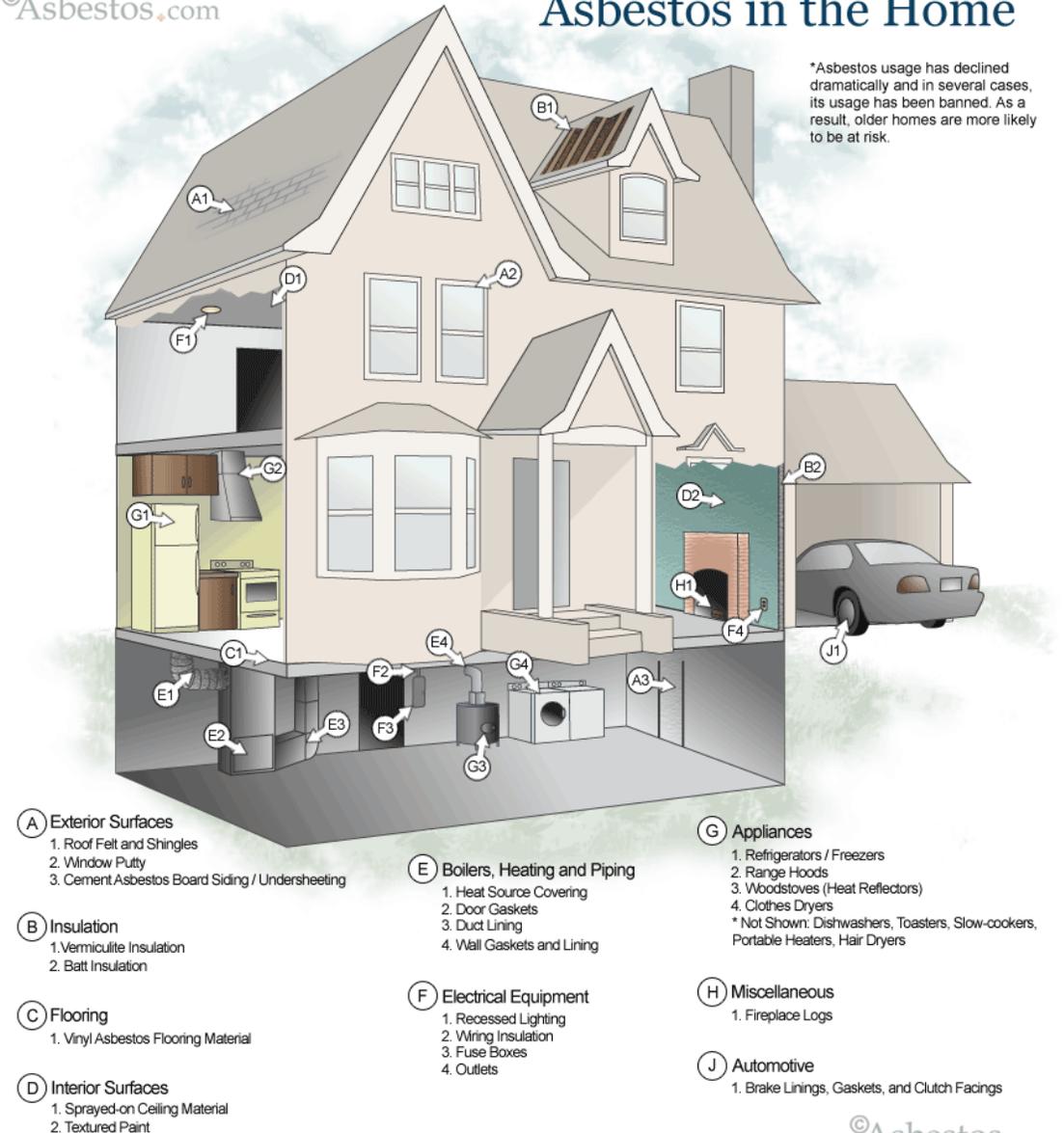
Airborne asbestos fibers inhaled deep into the lung can cause damage.

- Tiny breathable asbestos fibers are deposited in the alveoli, the ending small air sacs in the lungs.
- The body's defense mechanisms cannot break down the fibers.
- Asbestos fibers cause damage to the lungs.
- The fibers may also travel to the pleura, the membrane lining the outside of the lungs.



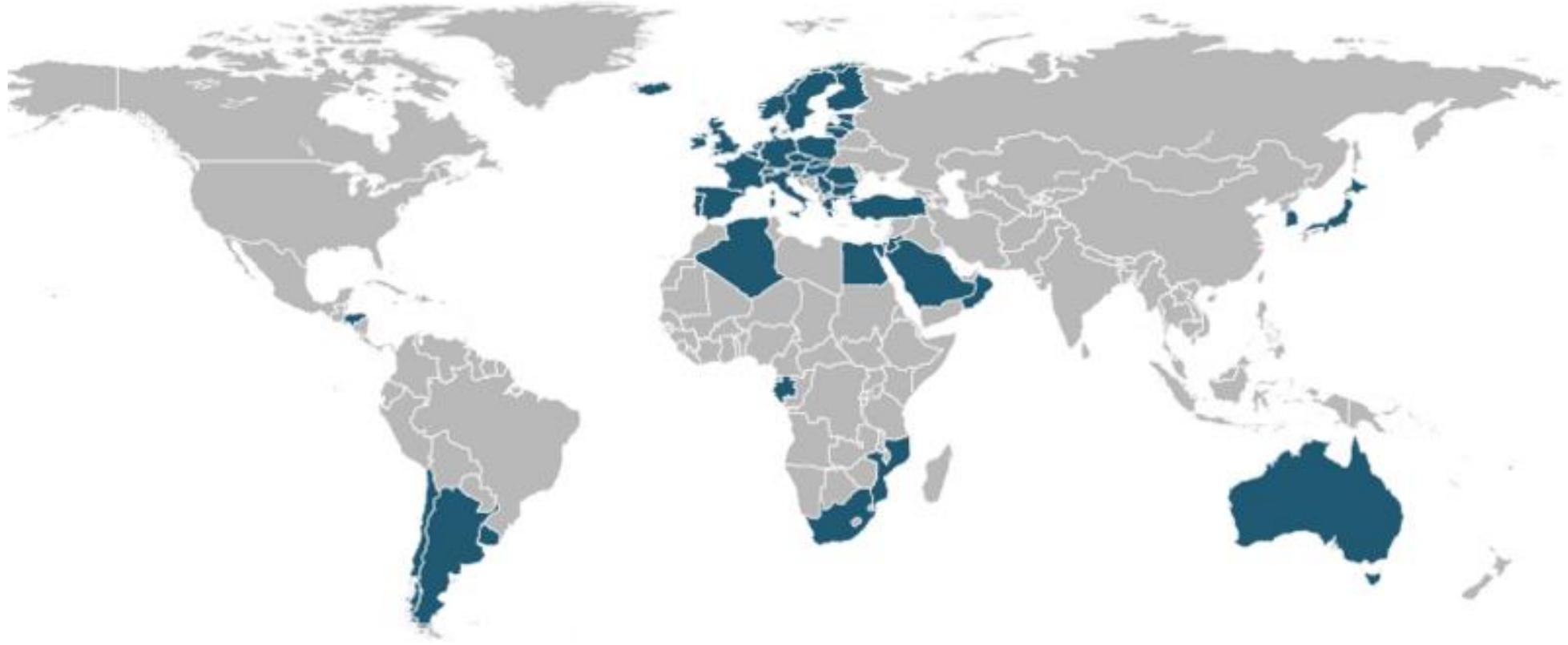
## Asbestos in the Home

\*Asbestos usage has declined dramatically and in several cases, its usage has been banned. As a result, older homes are more likely to be at risk.



©Asbestos.com

## Countries where Asbestos has been Banned



# Countries where Asbestos is being Produced Most



## 6. Visiting premises and sites

### Travelling to and from site

- Will it be safer to use public transport or use your own transport?
- Has the journey been planned to avoid driving too fast, for too long or when tired?
- Is the property professional particularly vulnerable (e.g. under prescribed medication)?
- Be aware of where to park (clear, secure, good lighting, easy to exit and not locked before you leave).

## 6. Visiting premises and sites

### Condition of property

- Are the premises known to be derelict or in poor condition, and if so what is the extent and nature of the damage?
- Are any areas defined as unsafe for access?
- Are security measures in force and how is access to be gained?
- If a construction site, what stage has been reached?
- What are the site rules?
- Is protective clothing or special equipment needed?

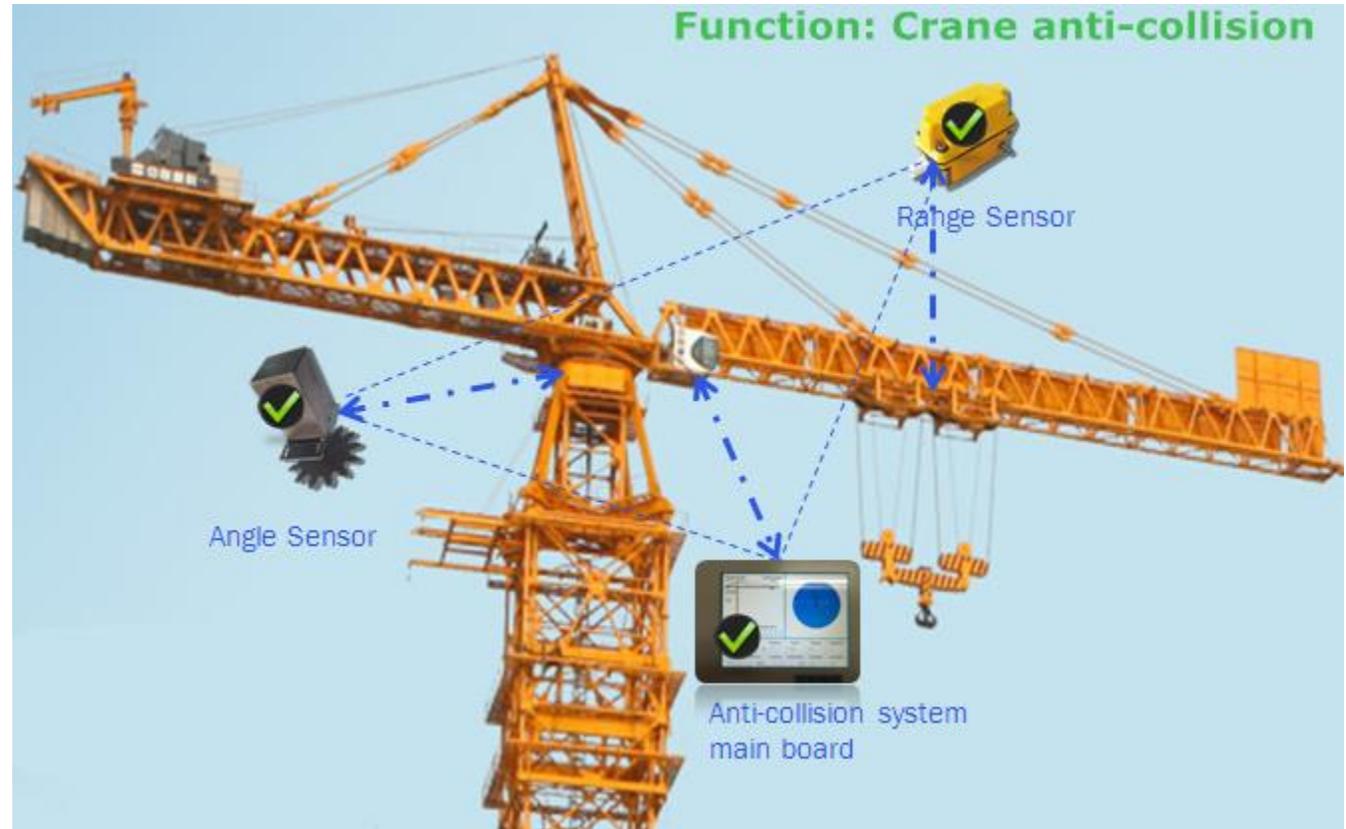
## 7. Procurement and management of contractors and construction work

- Cleaners (premises, windows, plant and equipment, etc.)
- 'For sale' board fitters
- Security guards
- Bailiffs (law officers)
- Other RICS property professionals (valuers, building surveyors, etc.)
- Other professionals (architects, engineers, etc.)
- Facilities management companies
- Building maintenance workers
- Construction companies.

# Modern Safety Measures- Anti Collision



It is a computerised management device fitted into the operating systems of **Tower Cranes** as additional protection



# Modern Safety Measures- On site Visualisation

On-Site Visualization (OSV), as its name suggests, is a real-time data processing technology used to check [safety](#) levels at [construction sites](#). A device with built-in LEDs is attached to walls and pillars at the building site and measures any irregularities or tilting.



Two devices used in the project: the LEC (left) and LEIS (right). These devices are attached to walls, and change color to warn of danger, measuring small irregularities in structures. Credit: Kobe University

# Modern Safety Measures-Building Information Modelling



# Modern Safety Measures-Building Information Modelling

- **Clash detection during early design stages of the projects**

BIM provides excellent grounds for clash detection and elimination between architectural and MEP drawings

- **Visual representation of site conditions for workers**

BIM provides workers with a solid visual understanding of a site and the working conditions before they even begin construction. This is especially important for new workers to the site who are unaware of the site safety measures put in place. By using BIM software, new workers can understand construction processes better and faster.

- **Identify potential hazards through 4D scheduling**

Using 4D scheduling and sequencing with site logistics planning can easily help identify traffic considerations and potential hazards around the site before even breaking ground. Using the 4D model to evaluate the erection sequence and major construction activities is an incredible asset that allows Hourigan to prepare a choreographed safety plan for workers—eliminating hazards early and providing a safer work environment in the field.

- **Prepare better for each task**

Each task on a construction site has its own risks. BIM has the ability to focus in on each individual task so workers can better identify the risks, prepare for the work at hand and, therefore, complete the task more efficiently and safely.

Thank You and Take Home the Below Message

