

Successful
Practical
Relevant



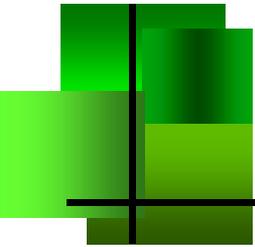
NEBOSH National General Certificate

Foundations in Health
and Safety
Element 1



Scope & Nature

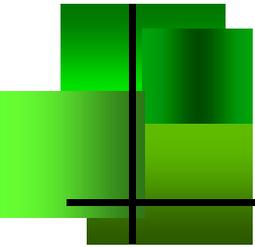
- Occupational H&S is relevant to all branches of industry
 - Business and commerce
 - Factories and mining
 - IT & schools
 - Hospitals and shops
 - Construction & transport
- It is multi-disciplinary in nature
 - Law
 - Ergonomics
 - Human behaviour
 - Physics, chemistry & biology
 - Statistics



Barriers to Good Standards of H&S



- Complexity
 - There are too many pieces of legislation
 - It is difficult to know exactly what's required
- Competing & conflicting demands
 - Production takes precedence over safety
 - Health and safety costs money
 - It slows the job down
- Behavioural issues
 - We've always done it this way
 - Health and safety is for wimps



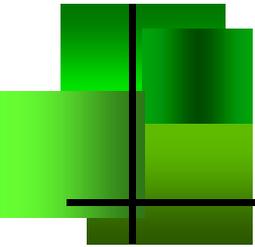
Some Basic Definitions

- Health
 - The protection of bodies and minds of people from illness resulting from the materials, processes or procedures used in the workplace
- Safety
 - The protection of people from physical injury
- The borderline between what is health and what is safety is ill-defined

At a Glance Summary

Employee Workplace Injury	Year	Year	Year	Year	Year	Year
	1974	2009/10	2011/12	2012/13	2013/14	2014/15
Fatal injuries to employees	651	147	171	150	136	*142
Fatality rate per 100 000 employees	2.9	0.5	0.45	0.43	0.36	*0.46
Self-employed in above total	Not Known	43	52	49	44	*43
Members of public killed (excl. rail)	Not Known	84	67	113	46	*102
Number of non-fatal injuries	336,701	26,268	22,094	20,214	19,118	*18084
Occupational diseases	1974	2008	2010	2011	2012	2013
Deaths from asbestosis	25	96	412	429	464	217
Deaths from mesothelioma	243	2,249	2347	2291	2538	2538

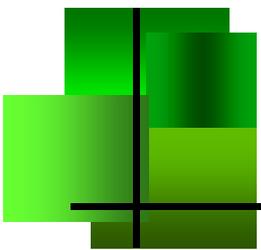
* Indicates provisional figures for the year (figures finalised July 2016)



Society's Expectations for H&S

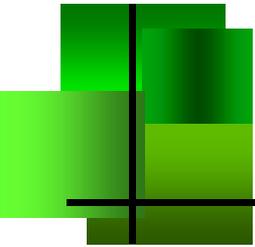


- Society's attitude to workplace injuries has changed in the post-war years
 - People formerly accepted an “occupational hazard” injury
 - It is no longer acceptable to be injured at work
 - People expect a safe work environment
 - Television and press now readily report serious injuries suffered at work
 - People are now more ready to action injuries suffered at work



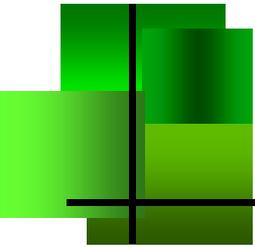
Why is it important to manage safely?

- Moral
- Legal
- Financial (Economic)



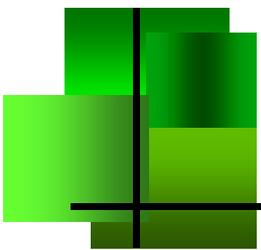
Moral

- Duty of reasonable care
- Unacceptability of putting health and safety of people at risk
- Society's attitude to moral obligations



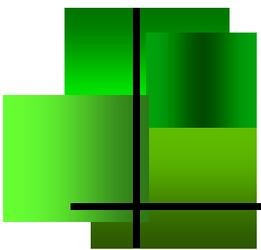
Legal

- Health and Safety legislation may place duties of absolute, practicable or reasonably practical care
- Preventative (by enforcement notices)
- Punitive (through criminal sanctions)
- Compensatory (compulsory insurance)



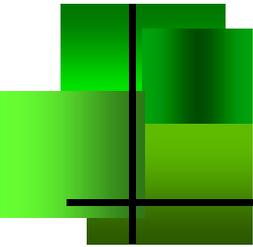
Financial (Economic)

- Accidents costs can be placed into two categories:
 - Direct costs; and
 - Indirect costs.



Financial (Economic)

- Accidents – direct costs:
 - Insurance cover increase
 - Compensatory payments
 - Fines
 - Damage to equipment, materials, property and environment
 - Lost time of injured persons and continued payments to employees



Financial (Economic)

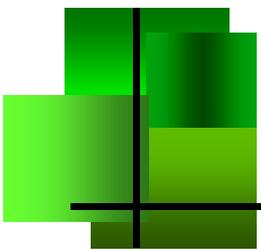
- Accidents – indirect costs:
 - Orders not filled on time, bad press and loss of future orders
 - Loss of bonuses
 - Penalty scheme clauses
 - Lost time of other employees who stop work
 - Lost time of supervisors or managers
 - Assisting injured employees
 - Investigating the cause(s) of the accident
 - Arranging for the injured employee's work to be continued by some other employee
 - Selecting, training and/or induction of a new employee to replace injured employee
 - Preparing accident reports, attending hearings, inquests courts etc.
 - Time and skill of specialists (first aid/fire/clean up etc.)

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Accidents and Incident Reporting





Accident & Incident Reporting

- Reasons why accidents are not reported:
 - Apathy
 - Fear of repercussions
 - Ignorance
 - Pressure of work
- Why report accidents:
 - Because the law say so
 - To prevent further accidents
 - To identify trends

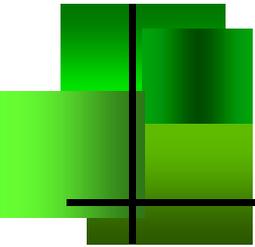
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Reporting of Injuries Diseases and Dangerous Occurrences Regulations

RIDDOR





RIDDOR 2013

Reporting procedures covers:

- Fatalities;
- Specified (formally major injuries);
- Delayed death;
- More than seven days injuries:
 - (either not returning to work or returning to other duties)
- Specified diseases;
- Dangerous occurrences

Fatalities and Specified Injuries

- Any fatalities at work.
- Specified injuries e.g.
 - Fractures (excluding fingers & toes)
 - Broken bones
 - Amputations
 - Dislocations – main limbs
 - Loss of sight (including reduced visibility)
 - Chemical or metal burns to eyes
 - Serious burns (over 10% of body)
 - Scalping
- A fatality occurring within one year of an incident.

Fatalities and Specified Injuries

- The employer must notify the Enforcing Authority (EA) immediately (usually by telephone)
- An accident report form (F2508) must be completed and submitted to the EA within 10 days of the incident.
- Self-employed are exempt from this requirement of reporting immediately (from their bed in hospital!), but they or someone else must still send a report form within 10 days.

Over 7-Day Injuries

- An injury that is not specified, but results in the injured person being away from work or unable to do their normal work for more than 7-days (including non-working days).
- If an over 7-day injury occurs to an employee or a self-employed person working on the premises, the employer must send a completed accident report (F2508) to the EA within 15 days.

Specified Injuries – 1

- Fractures, other than to fingers, thumbs and toes;
- Amputation of an arm, hand, finger, thumb, leg, foot or toe;
- Any injury likely to lead to permanent loss of sight or reduction in sight in one or both eyes;
- Any crush injury to the head or torso causing damage to the brain or internal organs;
- Any burn injury (including scalding) which covers more than 10% of the whole body's total surface area; or causes significant damage to the eyes, respiratory system or other vital organs;

Specified Injuries – 2

- Any degree of scalping requiring hospital treatment;
- Any loss of consciousness caused by head injury or asphyxia; and
- Any other injury arising from working in an enclosed space which leads to hypothermia or heat-induced illness or requires resuscitation or admittance to hospital for more than 24 hours

Specified Diseases – 1

- **Carpal Tunnel Syndrome:** where the person's work involves regular use of percussive or vibrating tools.
- **Cramp of the hand or forearm:** where the person's work involves prolonged periods of repetitive movement of the fingers, hand or arm.
- **Occupational dermatitis:** where the person's work involves significant or regular exposure to a known skin sensitiser or irritant.

Specified Diseases – 2

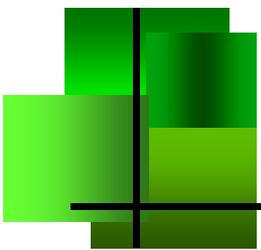


- **Hand Arm Vibration Syndrome:** where the person's work involves regular use of percussive or vibrating tools, or the holding of materials which are subject to percussive processes, or processes causing vibration.
- **Occupational asthma:** where the person's work involves significant or regular exposure to a known respiratory sensitiser
- **Tendonitis or tenosynovitis:** in the hand or forearm, where the person's work is physically demanding and involves frequent, repetitive movements.



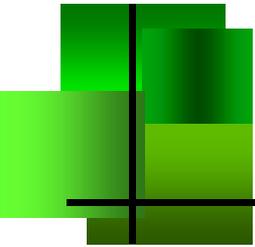
Specified Diseases – 3

- **Occupational Cancers:** e.g.
 - Mesothelioma or lung cancer in a person who is occupationally exposed to asbestos fibres
 - Cancer of the nasal cavity or sinuses in a person who is occupationally exposed to wood dust
- **Biological Agents:** covers any acute illness which requires medical treatment attributable to a work-related exposure to a biological agent.
 - COSHH Regs define biological agent as a micro-organism, cell culture, or human endoparasite which may cause infection, allergy, toxicity or other hazard to human health.



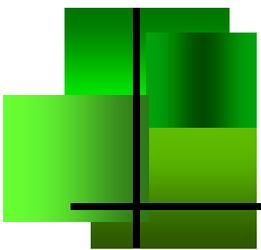
Reporting Specified Diseases

- If an employer is notified by a doctor that an employee is suffering from reportable work-related disease, the employer must send a completed disease report form (F2508A)
- Records must be kept.
- A list of reportable diseases can be found in the regulations.



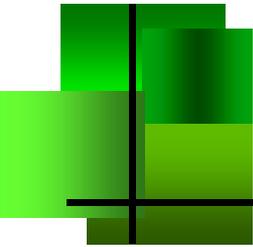
Examples of Dangerous Occurrences

- Collapse, overturning or failure of load bearing parts of lifts and lifting equipment.
- Plant or equipment coming into contact with overhead power lines
- Accidental release of substance that could cause personal injury, other than through combustion of flammable liquids or gases



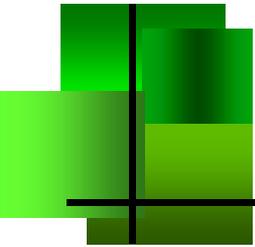
Dangerous Occurrences

- General:
 1. Electrical incidents causing explosion or fire;
 2. Explosive incidents;
 3. Biological incidents;
 4. Breathing apparatus failure, even if under test;
 5. Diving operations;
 6. Collapse of scaffold over 5 metres;
 7. Wells;
 8. Pipelines or pipeline work;
 9. Structural collapse over 5 tonnes;
 10. Explosions or fire; and
 11. Release of flammable liquids and gases.
- There are more listed for Mines/Quarries/Transport systems and Offshore workplaces;



Dangerous Occurrences

- If something happens that does not result in a reportable injury, but which clearly could have done, then it may be a dangerous occurrence.
- Such incidents must be reported immediately – usually by telephone – so that the authority can decide if it needs to investigate.
- This must be followed up by submitting a completed accident report (F2508DO) within 10 days of the incident occurring.



Statutory Recording and Reporting Requirements



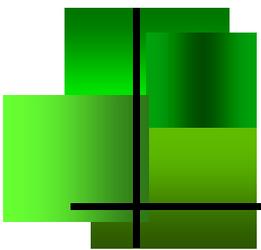
- Incident reports can be made in:
 - By telephone (during opening hours, 08:30 to 17:00 Mon to Fri normal working days)
 - Via the internet (at any time)

RIDDOR – Who Reports

Reportable Event	Injured Person	Responsible Person
Death, specified injury, over 7 day injury or disease	Employee at work	Employer
Death, specified injury or over 7 day injury	A self employed person at work in premises controlled by someone else	Person in control of premises
Specified injury, over 7 day injury or case of disease	A self employed person at work on their own premises	Self employed person or someone action on their behalf
Death or reportable injury	A person not at work	Person in control of premises
Dangerous Occurrence		Person in control of premises

Keeping Records

- Records must be kept of all reportable deaths, injuries and dangerous occurrences and should include:
 - Date and time
 - Injured person: name, occupation and injury
 - Place where it happened
 - Brief description of circumstances
- Retain records for at least 3 years



Injuries to Members of the Public



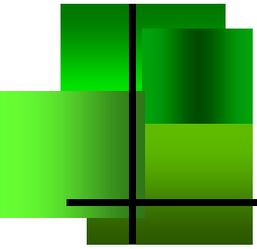
- Accidents to members of the public or others who are not at work must be reported if they result in an injury and the person is taken directly from the scene of the accident to hospital for treatment to that injury.
- Examinations and diagnostic tests do not constitute 'treatment' in such circumstances.
- Also, there is no need to report incidents where people are taken to hospital purely as a precaution when no injury is apparent.

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Accident Book





Accident Book Employers Legal Duty

- Accident Book is mandatory under the Social Security (Claims and Payments) Regulations 1979
 - If an employer normally employs 10 or more persons simultaneously on or about the same premises
- Accident Book can be a BL 510 or an equivalent log of accidents, which might be held on a computer system
- The Data Protection Act (from 31/12/03)
 - Since 01/01/04, the book now contains detachable sheets.

The Accident Book

- The minimum particulars:
 - Full name and occupation of the injured person
 - Date and time of the accident
 - Place where the accident happened
 - Cause and nature of the injury
 - Details of the person giving notice
 - if not the injured person
- Must be kept for 3 yrs
- Main purposes is to provide:
 - Initial record of the accident
 - Record of injuries/diseases which could give rise to a claim for Industrial Injuries Disablement Benefit

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First Aid at Work



First Aid at Work

- Applicable Legislation:
 - Health & Safety at Work Act 1974
 - Health & Safety (First Aid) Regulations 1981
 - ACoP
 - Guidance notes

First Aid at Work

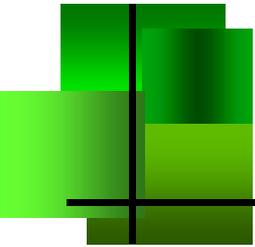
Duty of Employers

- Provide adequate first-aid equipment and facilities appropriate to the type of work or operations undertaken;
- Appoint a sufficient number of suitable and trained people to render first aid to employees who are injured or become ill at work;
- Appoint sufficient number of suitable people who, in the absence of the first aider, will be capable of dealing with an injured or ill person;
- Inform employees of the first-aid arrangements.

General requirement based on a risk assessment

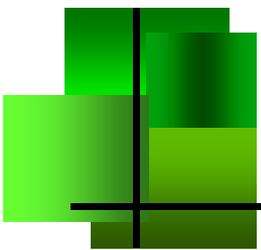
Exercise

- *Identify* the factors that would need to be considered when deciding on the number of First Aiders that would be required on site.



First Aid - Influencing Factors

- Type of work or operations being carried out;
- Lone workers or scattered isolated locations;
- If there are special or unusual hazards;
- If shift work is being undertaken;
- The maximum number of people on site;
- Remoteness to emergency services;
- Cover for holidays and sickness;
- Presence of workplace trainees;
- The history of accidents on site;
- The types of people who may need to be treated;
- Current 1st aid provision (e.g. shared site); etc.



Trained and Suitable Personnel



- First aider (3 day course):
 - must receive training and hold a current certificate from a competent organisation.
- Emergency First Aider at Work (EFAW – 1 day course)
- Appointed person (no longer required to be trained):
 - May be appropriate in certain situations
- ACoP **suggests** that where there are 5-50 employees are working at least 1 first aider should be present

Role of Trained Personnel

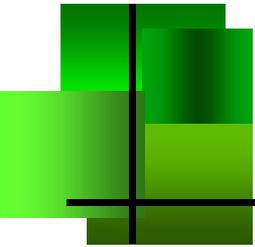
- First-aiders and other personnel should never administer treatment they have not been trained to do.
- First Aiders role is to:
 - Provide treatment for those injuries which otherwise would go untreated; and
 - Assist the victim whilst awaiting the medical services.
- Assisting could include:
 - Preventing any serious blood loss
 - Maintaining breathing
 - Attending to burns or scalds
 - Preventing shock
 - Dealing with localised injuries.

Equipment and Facilities

- Employees should have:
 - Quick and easy access to first aid facilities
 - Distribution of facilities will depend on each site
- Employers must provide:
 - One or more first aid boxes
 - These must be readily accessible and clearly marked
- There may be a requirement for special equipment depending on the nature of your undertaking.

Practice Question

- With reference to the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR) 2013:
 - (a) **Give** the meaning of the term ‘*Dangerous Occurrence*’; (2)
 - (b) **Identify TWO** examples of a dangerous occurrence; (2)
 - (c) **Outline** the requirements for reporting a dangerous occurrence. (4)



Practice Question

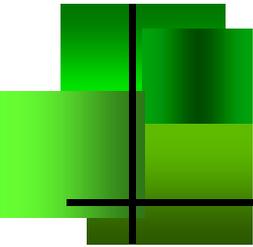
- An employee has suffered a fatal injury at work.
 - (a) **Outline** the procedure for reporting the accident to the enforcing authority. (4)
 - (b) **Identify** who should be informed of the accident, other than the enforcing authority. (4)

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The Legal System





Sources of Health and Safety Law



- Parliament
 - Acts
 - Regulations
 - Orders
- Europe
 - Treaties
 - Regulations
 - Directives
- Judicial Precedent
 - Statutory Interpretation
 - Common Law

Common Law

Judicial Precedence

- Recorded in Law Reports
- Established 'Duty of Care' for Individuals and Employers
- Law of Tort (Tort = civil wrong e.g. negligence, nuisance)
- etc.

Statute Law

Law passed by Parliament

Supersedes all other law

Usually in Acts & Regulations

Supported by ACoPs & Guidance

Best course of action for society

Civil Action (Law)

Compensation (damages)

County Court or High Court

Individual v. Individual

Can insure

“On balance of probabilities”

Statute of limitations – 3 years

Criminal Action (Law)

Punish (fines, jail or both)

Magistrates or Crown Court

State (R) v. Individual/Co.

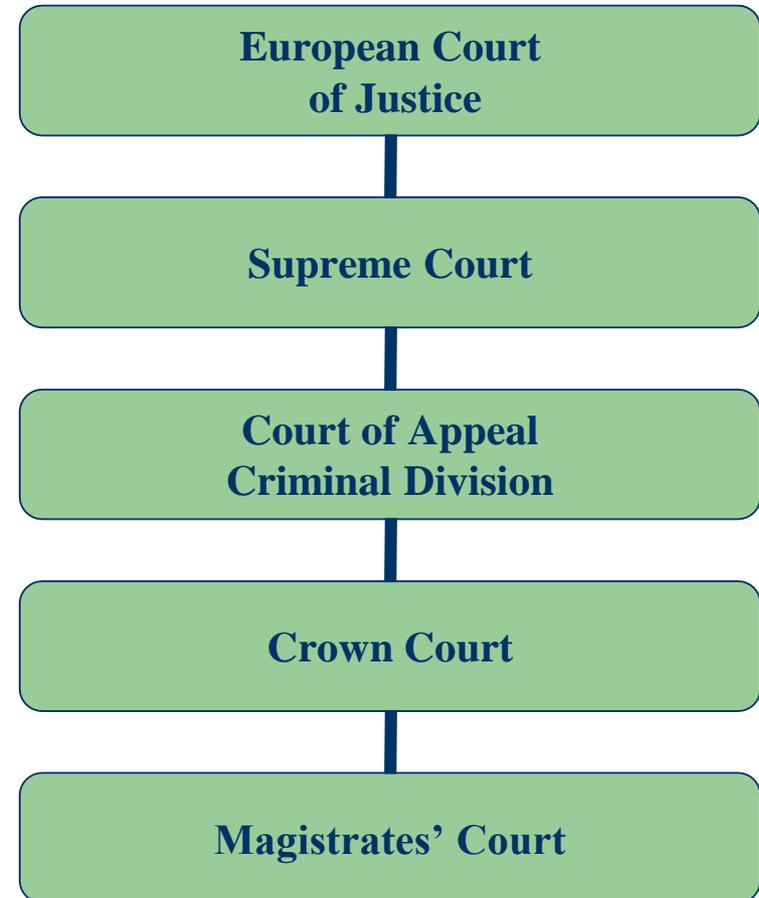
Cannot insure

“Beyond reasonable doubt”

Statute of limitations – None

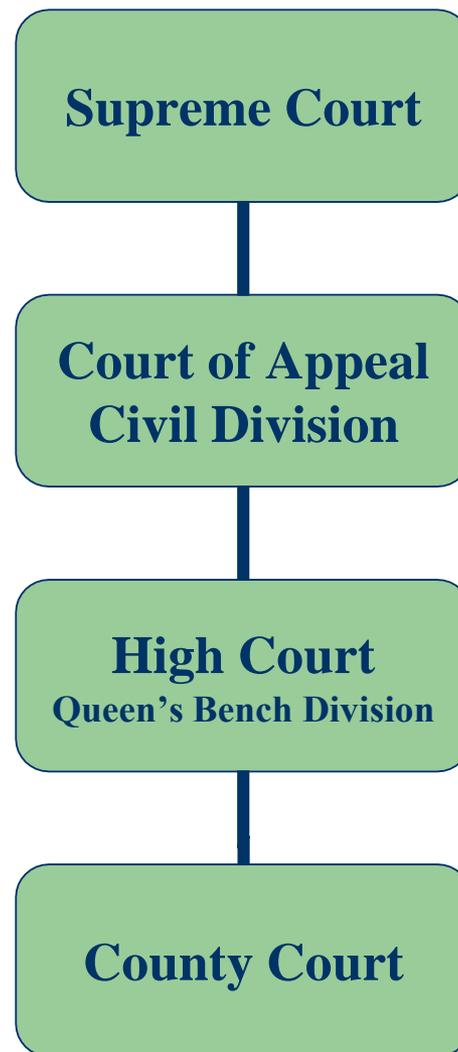
Structure of the Criminal Courts

- Magistrates' Court
 - Not legally trained
 - Sit in two or three
 - May be a district judge
 - No jury
- Crown Court
 - Judge and jury
- Court of Appeal
 - Appeal against sentence
 - Appeal on law
- Supreme Court
 - Appeal on law only
- European Court of Justice
 - Implementation of directives



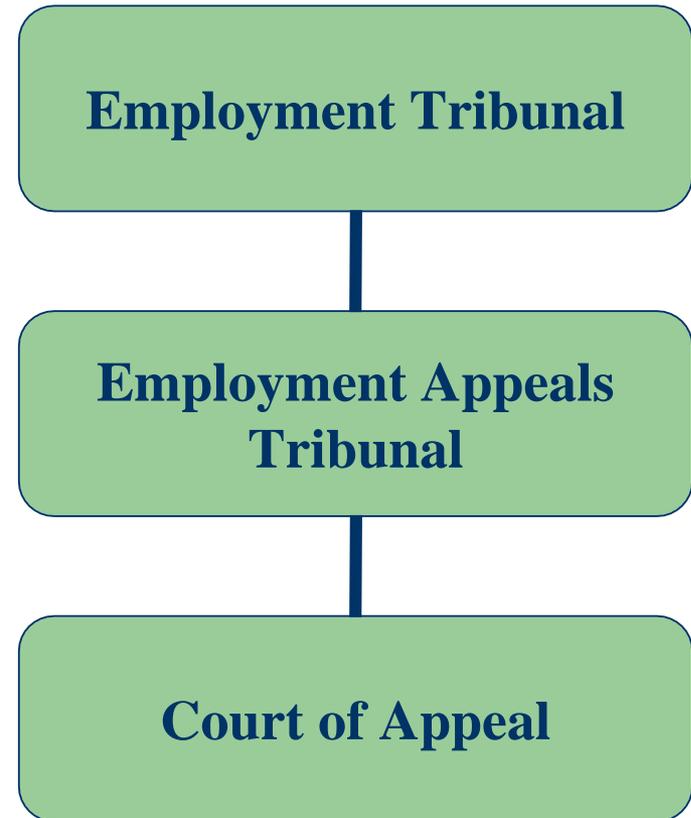
Structure of the Civil Courts

- **County Court**
 - Uncomplicated personal injury claims up to £50,000
- **High Court**
 - A divisional court with three divisions
 - Queen's Bench Division hears personal injury claims
 - Hears complex cases and awards over £50k
- **Court of Appeal**
 - Hears appeals from lower courts
- **Supreme Court**
 - Highest court of appeal
 - Only on points of law only



Other Courts

- Employment Tribunal
 - Hears appeals against notices issued by enforcing authorities
- Employment Appeals Tribunal
- Coroner's Court
 - Looks at the cause of death of a person (inquests)
 - The Coroner's Court Act has been updated to include Corporate Manslaughter



Statute Law & Common Law



● Statute Law

- Law laid down Parliament
- Recorded in Acts of Parliament
- HASAWA 1974
- Specific duties mainly in Regulations (SI's)
- Management of H&S at Work Regulations
- Takes precedence over common law

● Common Law

- Based on judgments made by courts
- Strictly judges in court
- Generally bound by earlier judgments
- Lower court following superior courts
- Recorded in Law Reports
- Definitions of negligence, duty of care, as far as reasonably practicable all from common law



Tort of Negligence

- Lat. negligentia, from neglegere, to neglect, literally "not to pick up something"
- A failure to exercise reasonable care
- "Reasonable Man Test"
 - Doing something a reasonable person wouldn't do or
 - Not doing something a reasonable person would do

Test for Negligence

- Duty of Care owed
- Breach of the Duty of Care
- Damage, Injury or Loss

Defining Cases

- Duty of Care Owed
 - To whom do you owe a duty of care?
 - Donoghue v Stevenson 1932
 - Wilson & Clyde Coal Co v English 1938
 - Is the standard fixed?
 - Paris v Stepney Borough Council
 - Does every possibility have to be considered?
 - Latimer v AEC Ltd

Duty of Care

The case that changed civil law

- **Donoghue v Stevenson 1932**

Lord Atkin ruled:

‘you must take reasonable care to avoid acts or omissions which you can reasonably foresee would be likely to injury your neighbour’

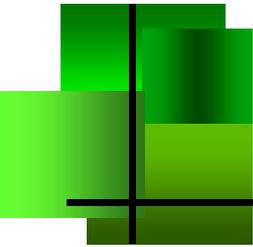
Who in law is my neighbour?



‘persons who are so closely and directly affect by my act that I ought reasonably to have them in contemplation as being so affected’



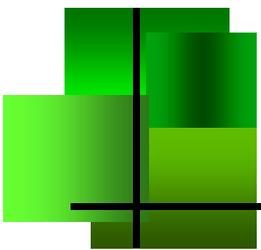
Now forms basis of s7 of HASWA



Employer's Common Law Duty of Care

Wilson and Clyde Coal Co v English

- Employer's duty to each of his employees
- The duty cannot be assigned to another person
- Duty falls into 4 groups
 - Safe place of work, including access and egress
 - Safe plant and equipment
 - A safe system of work
 - Safe and competent fellow employees and adequate levels of supervision, information, instruction and training
- Now forms basis of s2 of HSWA



Paris v Stepney Borough Council 1950

Special duty of care:

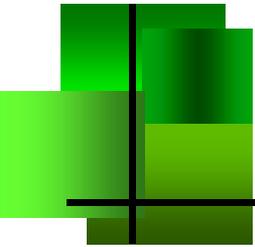
- Where the employer is aware an employee has a disability, special precautions should be taken for employer to fulfil its duty of care
- Can also apply to other groups e.g.
 - Children
 - Members of the public
 - Other contractors

Latimer v AEC Ltd

- Heavy rainstorm had flooded premises and oil in channels rose to the surface and left an oily film on the floor.
- Cleaned up using all the sawdust available to them.
- Whilst placing heavy barrel on a trolley Latimers' foot slipped, he fell and the barrel crushed his left ankle.
- The trial judge found a breach of common law duty.
- The Court of Appeal reversed this decision.
 - The employer took every step reasonably in the circumstances and in so doing had negated any possible allegation of negligence.
- Defendant does not have to totally eliminate the risk - must do as much as reasonable person would do.

Vicarious Liability

- Liability of an Employer for the wrongful acts of his Employees while carrying out their duties
- Also applies to Contractors in his employ
- Master/servant relationship
- Must be within the course of the Master's instructions
- Not on a "frolic of his own"



Defences to Negligence Claim

- No duty owed
- Duty owed is different from that claimed
- No breach of the duty
- No damage, injury or loss
- Damage was not a direct result of the breach
- “To one who is willing no harm is done”
- Contributory Negligence
- Act of God

Occupier's Liability

- **Employers' Liability (Compulsory Insurance) Act 1969**
 - Compulsory insurance against an employers' liability to their own employees for damages
 - Must have cover for at least £5 million
- **Occupier's Liability Act 1957**
 - Duty to invited visitors
- **Occupier's Liability Act 1984**
 - Duty to non-invited persons

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Health and Safety Legislation



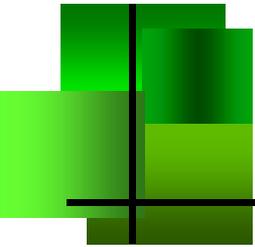
H&S Legislation

Applicable Legislation:

- The Health & Safety at Work Act 1974
 - Primary or direct legislation i.e. enabling
- The Construction (Design and Management) Regulations 2015
 - Secondary or Indirect (legislation)
- Approved Codes of Practice (ACOP)
- Guidance notes

H&S Guidance

- Issued by the HSE with the prefixes 'HSG xxx' or 'INDG xxx'.
- Can also be issued by other recognised bodies.
- Gives practical advice which if you follow should enable you to comply with the law.
- Cannot be used as evidence in a court of law by the prosecution.
- Could be used in your defence.



Approved Codes of Practice

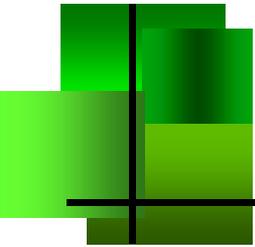
- ACoP's are issued by the HSE to support a particular regulation and they interpret that legislation to make it easier and clearer to understand.
- They set the minimum standard that has to be achieved in order for you to comply with legislation, however, you can do it whatever way you want as long as you meet or exceed the minimum standard.
- A breach of the standard enables the HSE to take legal action against you and, although you will be prosecuted for breaching the regulation, the standard in the ACoP can be used as evidence against you in a court of law.

Successful
Practical
Relevant



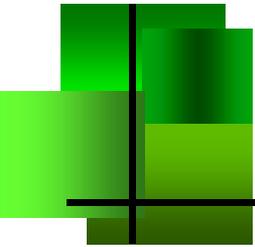
Health and Safety at Work etc. Act 1974





Definitions Absolute & Practicable

- **Absolute:**
 - Must/Shall be done
- **Practicable:**
 - If technically possible; capable of being achieved even though expensive, difficult or inconvenient



Definitions

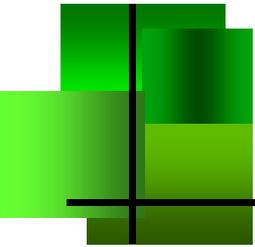
Reasonably Practicable

- Implies that a calculation of cost versus risk may be made
- If the risk of an accident or injury is very small, but the cost of prevention in terms of money, time or trouble is very high then it may not be reasonably practicable to take that precaution

HSWA 1974

Section 2

- 2(1) General duty of **employers to their employees**
 - To ensure, so far as reasonably practicable, the health, safety and welfare of all employees



Section 2(2) HSWA 1974

Employer's specific duties to employees include:

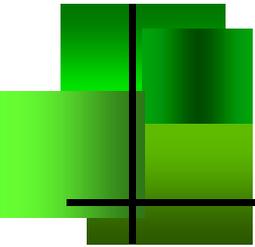
- (a) Safe plant and systems of work
- (b) Safe handling, storage and transport
- (c) Provision of information, instruction, training and adequate supervision
- (d) Safe place of work with safe access and egress
- (e) Safe working environment with adequate welfare

Section 2(3) HSWA

- Health & Safety Policy:

“... it shall be the duty of every employer to prepare and, as often as may be appropriate, revise a written statement of his general policy with respect to the health and safety at work of his employees and the organisation and arrangements for the time being in force for carrying out that policy, and to bring the statement and any revisions of it to the notice of all his employees.”

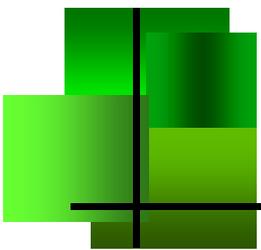
- Where there are more than 4 employees this policy shall be in writing



Health and Safety at Work Act 1974



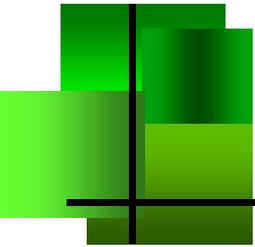
- Section 3 Duty of employers and self-employed to others
 - Public, contractors, customers
- Section 4 Controllers of premises
 - Safe access and egress
- Section 6 Duties of suppliers
 - Design, manufacture, import, supply



Health and Safety at Work Act 1974



- Section 7 - Employees duties to:
 - Take reasonable care of themselves and others by acts or omissions
 - Co-operate with employers
- Section 8 – Everybody duty:
 - Not to interfere with or misuse anything provided in the interest of health & safety
- Section 9 – Employers duty:
 - Not to charge employees for H&S measures



Section 2(2) HSWA 1974

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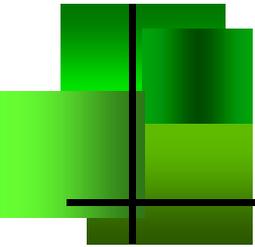
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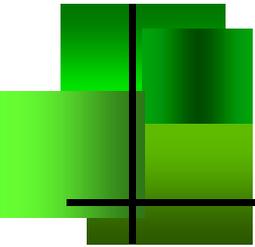
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Health and Safety at Work Act 1974



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Health and Safety at Work Act 1974



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- Section 9 – Employers duty:
 - Not to charge employees for H&S measures

**Health and Safety
Information for
Employee Regs
1989:
Display a completed
poster; or send an
approved leaflet
containing same
information to each
employee**



Health and Safety Law
What you need to know

All workers have a right to work in places where risks to their health and safety are properly controlled. Health and safety is about stopping you getting hurt at work or ill through work. Your employer is responsible for health and safety, but you must help.



What employers must do for you

- 1 Provide what could be done to protect you and the government to help it. This is part of risk assessment.
- 2 In a way you can understand, explain how risks will be controlled and tell you who is responsible for this.
- 3 Consult and work with you on your health and safety, especially when it comes to changes from before at the workplace.
- 4 Free of charge give you the health and safety training you need to do your job.
- 5 Free of charge provide you with any equipment or protective clothing you need, and ensure it is properly looked after.



What you must do

- 1 Follow the training you have received when using any work items or equipment you plan to use.
- 2 Take reasonable care of your own and other people's health and safety.
- 3 Co-operate with your employer on health and safety.
- 4 Tell someone your employer, supervisor or health and safety representative if you think the work or equipment you are using is putting anyone's health and safety at risk.



If there's a problem

- 1 If you are worried about health and safety in your workplace, talk to your employer, supervisor or health and safety representative.
- 2 You can also talk to our helpline for general information about health and safety at work.
- 3 If, after talking with your employer, supervisor or helpline, you are still worried, phone our helpline. We can give you as much support as we can, including advice on health and safety and the Employment Health & Safety Service. We don't have to give your name.

0845 300 9923

Other health and safety services

0845 345 0055

www.hse.gov.uk

Fire safety
For urgent advice on fire safety from the Fire and Rescue Service in your workplace, the office.

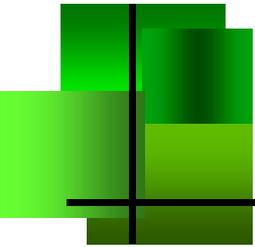
Employment rights
Find out more about your employment rights at:

www.direct.gov.uk



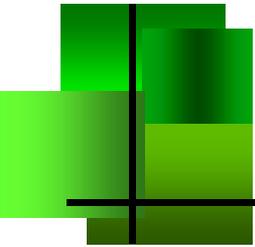
Health and Safety Executive





Enforcement

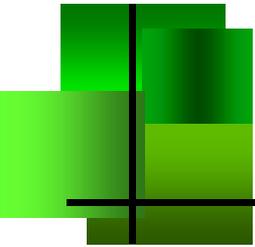
- HSE
- EHO
- Other Bodies
 - Crown Prosecution Service/Police
 - Fire and Rescue Services
 - Environment Agency
 - Office of Rail & Road (ORR)



Health and Safety Executive



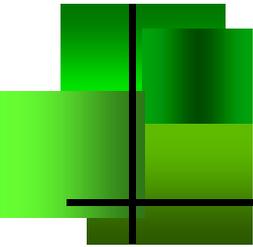
- Manufacturing
- Construction
- Public Services
 - Police
 - Education
 - Local Government
 - Fire Service
- Agriculture and Food Production
- Broadcasting
- Transportation
 - Bus, road haulage, ports and air transport



Environmental Health Offices



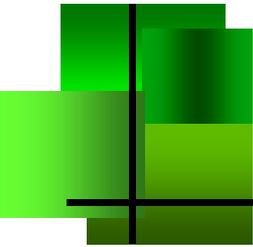
- Retail Shops
- Wholesale shops, warehouses and fuel storage depots
- Offices
- Catering, restaurants and bars
- Hotels, camp sites and other short stay accommodation
- Residential care homes
- Leisure & cultural services



Powers of Inspectors s.20 HSW



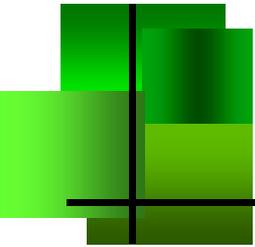
- Prosecute
- Issue Notices
 - Prohibition Notice
 - Improvement Notice
- Seize, destroy or render harmless any article or substance
- Enter premises at any reasonable time
- To be accompanied by a constable
- To be accompanied by other persons (experts)



Powers of Inspectors s.20 HSW



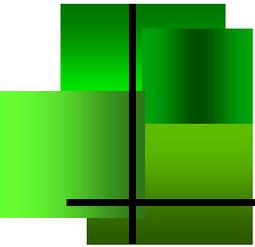
- Examine, investigate and require premises to be left undisturbed
- Take measurement and photographs
- Take Samples
- Take statements
- Inspect and take copies of documents



Improvement Notice s.21 HSW

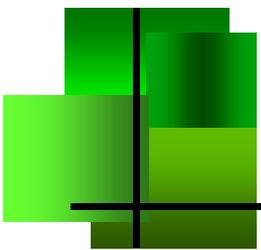


- Served where in the opinion of the inspector a person is:
 - Contravening one or more statutory provisions
 - Has contravened one or more statutory provision and is likely to do so again
 - The notice will state details of the breach
 - A time period will be given for the contravention to be remedied
 - It does not stop work continuing



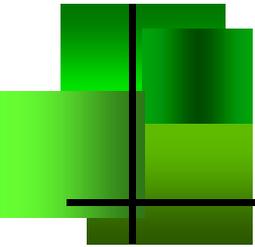
Appeal against an Improvement Notice

- Appeal to Employment Tribunal
- Appeal to be made within 21 days
- Tribunal can cancel or affirm the notice
- During the appeal the notice is suspended



Prohibition Notice s.22 HSW

- Issued where the inspector is of the opinion that the activity will or does involve a risk of serious personal injury
- The notice will give the inspectors opinion
- Will direct that the activity stops as directed in the notice or immediately



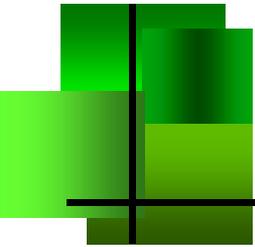
Appeal against a Prohibition Notice

- Appeal to Employment Tribunal
- Appeal to be made within 21 days
- Tribunal can cancel or affirm the notice
- During the appeal process the notice remains in force

HSWA - Section 36

Personal Liability

Where an offence is committed by a person due to the act or default of another, either or both may be prosecuted.



HSWA - Section 37

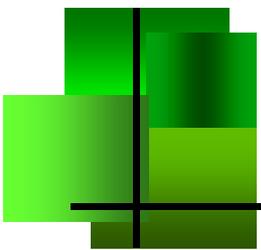
Corporate Liability

If an offence is committed by a corporate body with the knowledge or through the neglect of a responsible person, both that person and the body corporate are liable to prosecution

S.40 HSWA 1974

- Onus on proving what is practicable:
 - It shall be the duty of the accused to prove that it was ***not practicable nor reasonably practicable*** to do more than was in fact done to satisfy the duty.



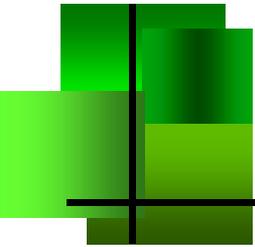


Penalties Available to the Courts

- Summary Offences:
 - Most H&S offences, an unlimited fine, for individuals and companies; and/or
 - a maximum of 12 months imprisonment
 - 5 years disqualification for directors
- Indictable Offences (solemn in Scotland):
 - Unlimited fine for all health and safety offences; and/or
 - up to 2 years imprisonment
 - 15 years disqualification for directors

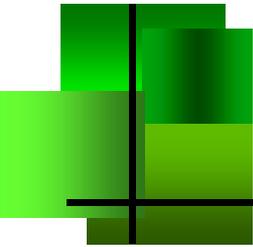
Some Other Terms

- Triable either way;
 - The case presented to the courts can be heard in either Magistrates Court or Crown Court.
- Doubled Barrelled Action:
 - The case is being tried in criminal courts at the same time that as the defendant is being sued by the injured party for compensation.



Defences for Criminal Offences

- Not guilty as the defendant fully met the statutory duties imposed on them by the statutory legislation they have been alleged to have breached.
 - This could be an absolute duty; or
 - A duty that was undertaken so far as practicable or so far as reasonably practicable.
- Not guilty as the alleged offence was caused by another person who was the ‘controlling mind’ whose actions resulted in the breach.



Test for Breach of Statutory Duty

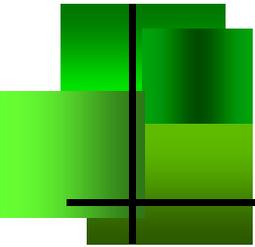
- Where a breach of the statute is actionable:
 - The claimant must show that there was a breach of a statutory duty
 - The harm sustained fell within the terms of the defendants statutory duty
 - i.e. the defendants breach of statutory duty caused the damage

Successful
Practical
Relevant



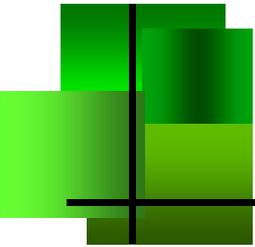
HSE Fee for Intervention





Fee for Intervention

- October 1st 2012 “Fee for Intervention” (FFI) introduced
- Charge by the inspectors of £124.00 per hour
- Fees invoked when investigating and resolving “material breaches of H&S”
- Charge payable within 30 days of invoice date
- If compliant with H&S legislation then no charge.



Fee for Intervention

- First six months HSE issued 5,766 invoices
- 60% of visits resulted in an invoice
- Number of invoices and amounts charged rising each quarter
- Fee will be charge if a notice or formal letter issued and will not only cover the inspectors time on site, but also back at their office for processing the relevant paperwork.

Successful
Practical
Relevant



Corporate Manslaughter



Corporate Manslaughter and Corporate Homicide Act 2007



- Received Royal Assent 26th July 2007
- Implemented in April 2008
- Corporate Manslaughter in England and Wales
- Corporate Homicide in Scotland



Corporate Manslaughter and
Corporate Homicide Act 2007

CHAPTER 19

CONTENTS

Corporate manslaughter and corporate homicide

1 The offence

Relevant duty of care

2 Meaning of "relevant duty of care"

3 Public policy decisions, exclusively public functions and statutory inspections

4 Military activities

5 Policing and law enforcement

6 Emergencies

7 Child-protection and probation functions

Gross breach

8 Factors for jury

Remedial orders and publicity orders

9 Power to order breach etc to be remedied

10 Power to order conviction etc to be publicised

Application to particular categories of organisation

11 Application to Crown bodies

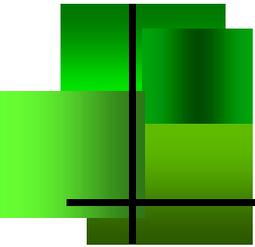
12 Application to armed forces

13 Application to police forces

14 Application to partnerships

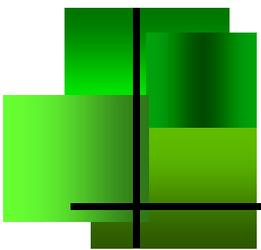
The Offence

- An ***organisation*** to which this Act applies is guilty of an offence if the way in which its activities are ***managed*** or ***organised*** —
 - causes a person's death, and
 - amounts to a gross breach of a relevant duty of care owed by the organisation to the deceased.



Central Test for a Conviction

- Responsible organisation must have owed a duty of care towards the person who died.
- Central test:
 - Failure in the way the organisation was managed or organised; and
 - The failure far below what could reasonably be expected



What the Jury has to Consider



- The jury:
 - To consider the seriousness of the breach of H&S law;
 - The extent to which it posed a risk of death; and
 - The attitudes, policies, systems of accepted practices etc of the organisation.
- Removes identification of a “who” test and introduces Senior Management test.

Penalties

- Fines on companies need to be large enough to make an impact on shareholders.
- A company is presumed to be capable of paying any fine imposed unless evidence is laid before the hearing.
- A deliberate breach of the legislation by a company or an individual with a view to profit seriously aggravates the offence.

(Sentencing guidelines indicate fines should be at least £500,000)

Remedial Order

- A court before which an organisation is convicted of corporate manslaughter ... may make an order requiring the organisation to take specified steps to remedy:
 - a) the breach;
 - b) any matter that appears to the court to have resulted from the relevant breach and to have been a cause of the death;
 - c) any deficiency, as regards health and safety matters.

Publicity

A court ... may make an order requiring the organisation to publicise in a specified manner:

- The fact that it has been convicted of the offence;
- Specified particulars of the offence;
- The amount of any fine imposed;
- The terms of any remedial order made.

Other Agencies

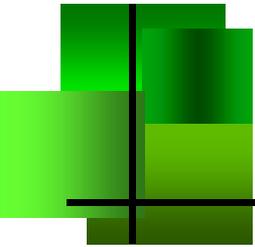
- **Fire & Rescue Authority**
 - Enforce fire safety law
 - Undertake random fire inspections
 - Examine fire risk assessments
 - Can issue notices
 - Alterations
 - Improvement
 - Prohibition
 - Need to be informed during planning stage of building alterations where fire safety may be affected

Successful
Practical
Relevant



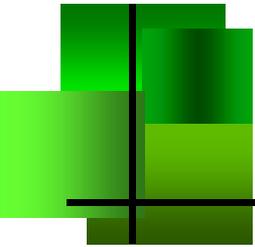
Other Enforcement Authorities





Other Agencies

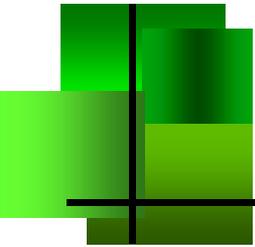
- **Environment Agency (SEPA in Scotland)**
 - Responsible for authorising & regulating emissions from industry
 - Ensures effective controls for pollution
 - Monitors radioactive emissions from nuclear power
 - Ensures discharges to controlled waters at acceptable level
 - Sets standards and issues permits for waste
 - Enforces environmental legislation



Other Agencies

- **Insurance Companies**

- Legal requirement to insure against liability for injury and disease from work activities
- Also offer fire and public liability
- Can influence H&S standards by weighing premiums against H&S record



Other Agencies

- **Crown Prosecution Service/Police**
 - Death in the workplace
 - Manslaughter
 - Involuntary Manslaughter
 - Individual offence
 - Corporate Manslaughter
 - Corporate Manslaughter and Corporate Homicide Act 2007
 - Companies and organisations can be found guilty of corporate manslaughter as a result of serious management failures resulting in a gross breach of a duty of care

NEBOSH 20 Point Question

An employee suffered a broken leg as a result of a fall from height. The accident was reported to the enforcing authority as a specified injury. The HSE investigated the accident.

- (a) **Identify 4** other types of specified injury listed in RIDDOR. **(4)**
- (b) **Outline** powers the inspector may use to investigate the accident. **(8)**
- (c) (i) **Identify** the court that would hear prosecutions for a health and safety offence summarily. **(1)**
- (ii) **Identify** the court that would hear prosecutions for a health and safety offence on indictment. **(1)**
- (iii) **Identify** the maximum penalties that **EACH** court can impose for breaches of the HSW Act 1974. **(4)**
- (d) **Outline** the conditions necessary for, **AND** the effect of, the serving of a Prohibition Notice. **(2)**

Successful
Practical
Relevant

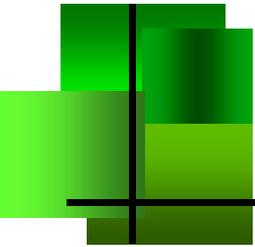


H&S Management Systems

Element 2 - PLAN

Key Elements of a H&S
Management System

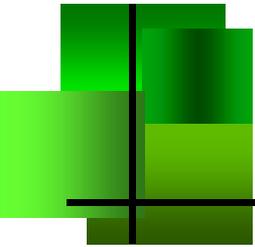




Section 2(3)

Requirement for a H&S Policy

- The Policy will hold the following sections;
 - A Policy Statement i.e. a High Level Summary
 - Statement of Intent; or
 - Vision Statement
 - Organisation
 - Specific appointments and duties
 - Organisational links and reporting structures
 - Arrangements
 - Timescales for delivery of specific functions
 - Identification of risk
 - Control strategies for identified risks
 - Communications
 - Review

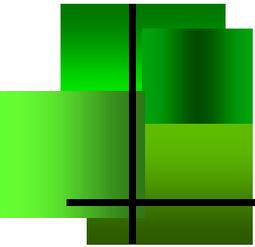


Key Elements of a Management System



Management of H&S at Work Regulations 1999:

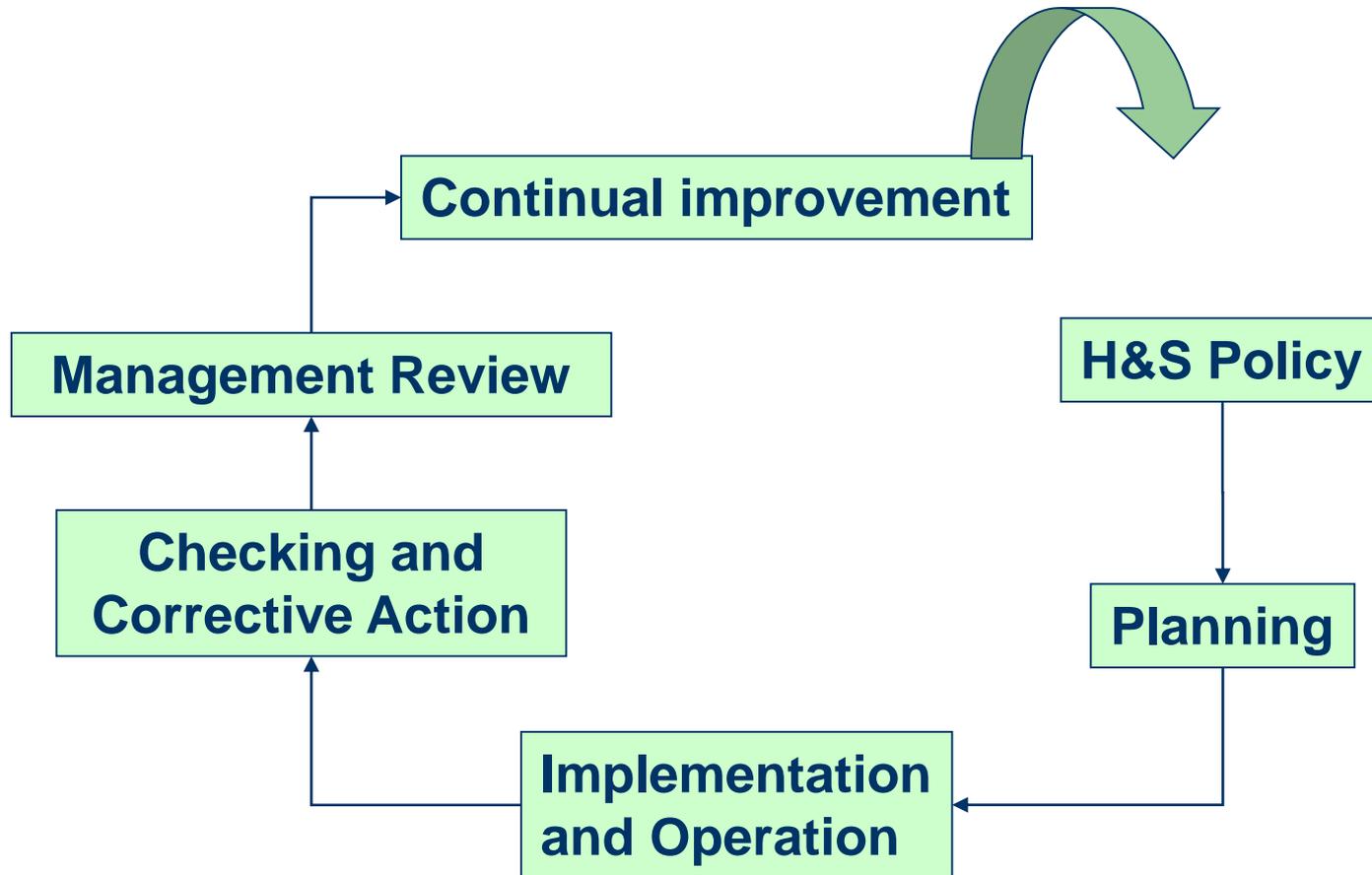
- Health and Safety Arrangements for:
 - Planning
 - Organising
 - Control
 - Monitor
 - Review
- 5 or more employee: to be recorded in writing
Implies that H&S management system is required



Management Systems

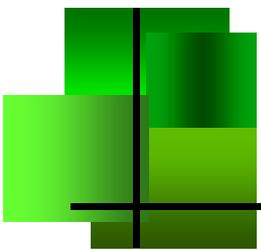
- Many management systems on the market
 - BS OHSAS 18001
 - HSG 65 (Successful H&S Management)
 - International Labour Organisation Series (UN)
- All ostensibly the same
- Applicable to all organisations (large or small)

BS OHSAS 18001



HSG65 - Successful Health and Safety Management

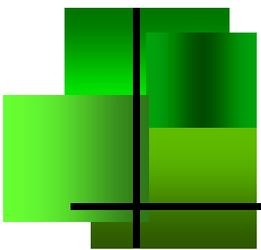




Elements of HSG 65 - **PLAN**

- **Policy**

- States intentions of the organisation in terms of:
 - Clear aims
 - Clear objectives
 - Clear targets
 - Senior management involvement
- Contributes to:
 - Business efficiency
 - Continuous improvement



Elements of HSG 65 - PLAN

- **Planning**

- H&S plan based on risk assessment
- Sets and implements:
 - Performance standards
 - Targets
 - Procedures
- Sets priorities and objectives for:
 - Elimination or control of hazards
 - Reduction of risk

Elements of HSG 65 - DO



- ***Risk profiling:***

- Looks at the levels of losses that could be sustained.

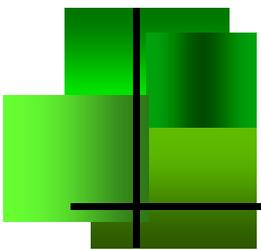
- ***Organising:***

- Identifies H&S ***responsibilities*** at all levels
- Development and maintenance of levels of ***control***
- ***Cooperation:*** pooling knowledge and experience through participation, commitment and involvement
- ***Competence:*** confirming those manage and influence health and safety have the knowledge and skills
- ***Communication*** of hazards, risks and preventative measures which are also discussed regularly

- ***Implementing:***

- Ensuring those who are carrying out the activities have rules to follow, the proper tools and equipment that are maintained.

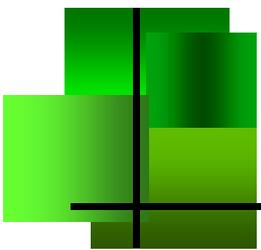




Elements of HSG 65 - CHECK

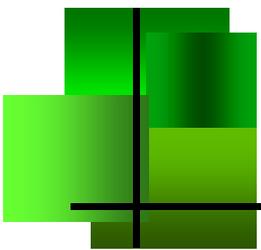


- **Measuring Performance:**
 - Active (proactive) monitoring
 - Reactive monitoring (e.g. accident investigation)
 - Measure against own long term goals and objectives



Elements of HSG 65 - ACT

- **Reviewing Performance:**
 - Should indicate whether policy needs to be altered
 - Comparison of internal indicators
 - Comparison against external indicators – similar organisations
 - Can check affects of changes within the organisation



Elements of HSG 65 - ACT

- **Lessons Learnt:**

- Lessons learnt from incidents should be shared with as many people who would benefit from it as possible.
- Root causes should be examined to see if lessons learnt could be relevant to other departments.
- The root cause from one incident could also be the possible cause of many more incidents.

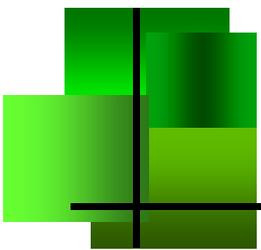
Successful
Practical
Relevant



Health and Safety Policy

Part 1 – Statement of Intent

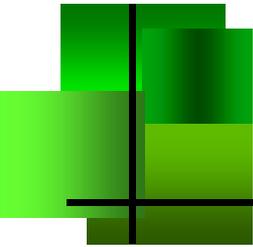




Requirements HASWA 1974

Section 2(3):

“... it shall be the duty of every employer to prepare and, as often as may be appropriate, revise a written statement of his general policy with respect to the health and safety at work of his employees and the organisation and arrangements for the time being in force for carrying out that policy, and to bring the statement and any revisions of it to the notice of all his employees.”

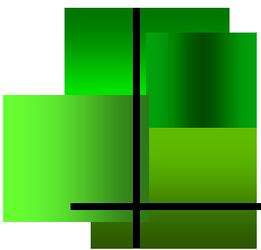


Safety Policy

Aims, Objectives and Key Elements



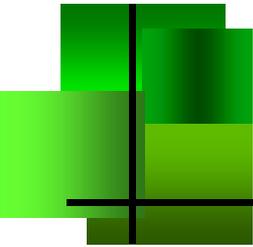
- An organisation's health and safety policy is a comprehensive statement of how it will deal with health and safety issues. The policy objectives are to:
 - State the overall aims of the organisation in terms of health and safety performance.
 - Identify the roles and responsibilities of managers, specialist H&S personnel and other employees.
 - Co-ordinate activities to identify, analyse and implement solutions to potential safety problems.
 - Define arrangements for promoting, planning and controlling all aspects of health and safety in the workplace.



Safety Policy

Aims, Objectives and Key Elements

- The policy to achieve this will consist of 3 parts:
 - A General Statement of Intent will:
 - Outline the organisations overall philosophy in relation to the management of health and safety; and
 - Set aims, objectives and targets.
 - The Roles and Responsibilities of Individuals will:
 - Outline the chain of command for H&S management
 - Identify roles/responsibilities for individuals/groups
 - Identify the change of delegation.
 - Arrangements, Systems and Procedures
 - Deals with the practical arrangements by which the general policy is to be effectively implemented.

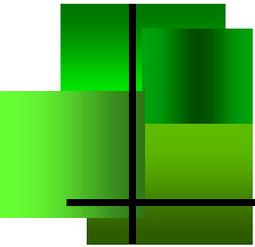


Safety Policy

Part 1 - General Statement of Intent



- Spells out the organisation's overall approach and aims in terms of health and safety.
- Should commit to achieving a standard at least as high as that required by law.
- Will generally acknowledge the legal duties and responsibilities applying to their particular circumstances.
- Will identify the main Director or Chief Officer with prime responsibility for health and safety.
 - This person should sign and date the statement to indicate when the current statement was prepared
- Provides a reference point for periodic review and revision.



Safety Policy

Part 1 - General Objectives



- Main objectives will relate to:
 - Recognition that health, safety and welfare is a management responsibility equal on footing with other management areas e.g. production and sales.
 - Recognition of common law and statutory obligations in relation to health, safety and welfare of its employees.
 - Management duty to see that everything reasonable is done to maintain a safe and healthy place of work.
 - Duty of employees to act responsibly and to do everything they can to prevent injury to themselves and others.
 - The commitment to monitor health and safety continuously and the review the policy in light of significant changes.



Safety Policy

Part 1 - Targets

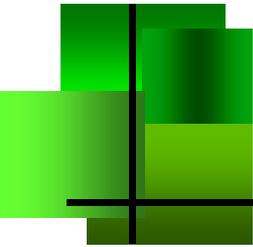


- As far as possible, the objectives should be able to have quantifiable targets for health and safety performance (immediate and long term) applied to them.
- They will probably include reference to such matters as:
 - Accident and Incident Rates
 - Monitoring
 - Regularity of Review

Setting Overall Objectives and Quantifiable Targets



- Objectives and Targets need to be **SMART**:
 - **S**pecific;
 - **M**easurable;
 - **A**chievable;
 - **R**easonable; and
 - **T**ime-bound.



Other Considerations When Looking at Health and Safety Performance



- Views of interested parties:
 - Clients may have requirements that need to be met to become an approved supplier/contractor;
- Technological options:
 - If looking to make use of advance technology, such as robotic systems or remote control machinery, activities should be safer and therefore there would be a higher expectation of good health and safety performance.
- Financial, operational and business requirements:
 - Poor performance will result in business losses and will have a financial and operational impact, also it may result in a loss of business opportunities.



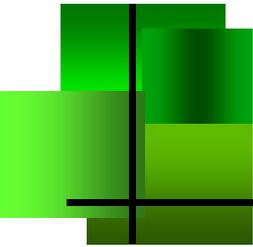
Successful
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Relevant



Health and Safety Policy

Part 2 - Organising





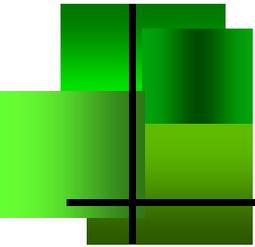
Safety Policy – Part 2

Organisation of Health and Safety



- Deals with the distribution of responsibilities for health and safety throughout the organisation.
- Should demonstrate in both written and diagrammatic form, how these responsibilities take place.
- Responsibilities should:
 - Be allocated to groups/individuals at every level.
 - Have defined lines of communication up and down.
 - Enable feedback of information as a natural part of the management system.
- Needs to cover the role of line managers in implementing and influencing the H&S policy and monitoring its effectiveness.



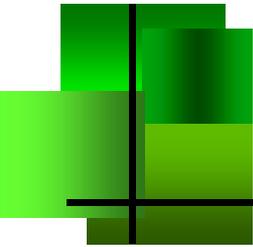


Safety Policy – Part 2

Responsibilities for Health & Safety

Should cover duties of:

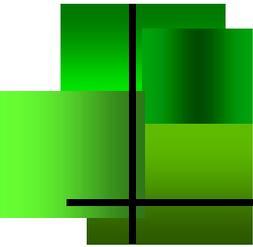
- Managers:
 - Directors
 - Works managers
 - Supervisors
 - Line managers etc.
- Specialists:
 - H&S Advisor
 - 1st Aiders
 - Fire officer etc.
- Employee representatives.
- Employees



Safety Policy – Part 2

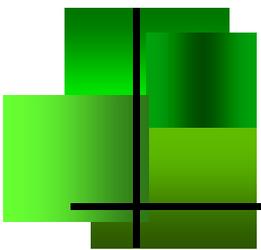
Responsibilities – Key Functions

- Should cover certain key functions such as:
 - Accident investigation and reporting
 - H&S training and information
 - Health surveillance
 - Monitoring and maintenance of plant and equipment.
 - Liaison with external agencies
 - Employee safety committees
 - Management committees monitoring day-to-day problems and employee safety committee concerns



Responsibility of Directors?

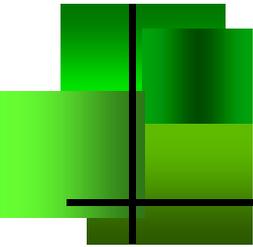
- All directors (collectively and individually) must ensure that:
 - Company fulfils its legal responsibilities for H&S.
 - The policy is properly defined and reflected in appropriate strategic and operation objectives.
 - The necessary resources are made available to maintain sound and efficient health and safety arrangements.
 - Responsibilities for H&S are properly assigned within the management structure and accepted at all levels.
 - Appropriate leadership is given to senior management in relation to the importance of H&S arrangements and their continual improvement.



Responsibility of Senior Managers?



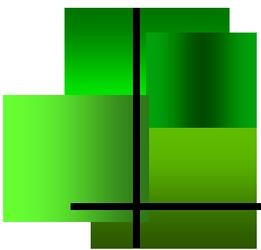
- Accountable individually to the Board of Directors for their own specialist areas and collectively in general terms for achieving the company policy and overall objectives.
- Must ensure that effective arrangements for:
 - Drawing up plans for, and monitoring the implementation of, the organisation's H&S policy.
 - Allocating resources for H&S procedures and measures, and for associated training programmes.
 - Ensuring that lower levels of management give H&S appropriate priority.



Responsibility of Middle Managers?



- Appropriate safe methods of working are in place for all workplace activities within their area, and kept under review.
- Fire precautions are implemented and understood by staff.
- Hazards arising from the use of noxious substances, or exposure to noise, dust or fumes, are eliminated or minimised.
- Workplace inspections are carried out and advice/support is given to improve methods of working.
- Appropriate safety personnel are available at all times.
- Effective health and safety training is given to all staff, including in particular during induction training.
- All accidents and dangerous occurrences are investigated and means of preventing recurrence are identified.



Responsibility of Supervisors?

- Established procedures and safe working practices are implemented at all times.
- All employees are provided with all necessary information and instruction to enable them to operate safely, with particular reference to hazardous substances and precautions in general.
- Remedial measures are introduced with immediate effect to reduce or eliminate unsafe acts/conditions.
- All accidents and other incidents that occur in their area are properly investigated and documented.

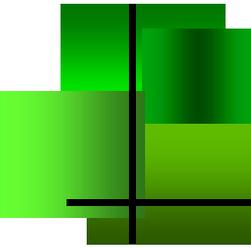
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Health and Safety Policy

Part 3 - Arrangements





Safety Policy – Part 3

Health and Safety Arrangements

- Details the systems, procedures and other measures which are required in order to put the health and safety policy into effect.
- It will cover the implementation, maintenance, monitoring and review of preventative and protective measures using the following steps:
 - Planning and organising
 - Controlling hazards
 - Consultation
 - Communication
 - Monitoring compliance and assessing effectiveness

Safety Policy – Part 3

Health and Safety Arrangements



Student exercise example answers.

- Risk assessments
- Safety training
- Safe systems of work
- Permits to work
- Safe place of work
- Environmental control
- Safe plant and equipment
- Machine/area guarding
- Maintenance records
- Noise control
- Dust control
- Use of toxic materials
- Working at height
- PPE and other safety equipment
- Workplace monitoring (e.g. safety inspections and auditing)
- Accident reporting and investigation
- Utilisation of safety committees and safety representatives.
- Procedures for contractors/visitors
- Medical and welfare facilities
- Fire safety and prevention
- Internal communication
- Emergency procedures

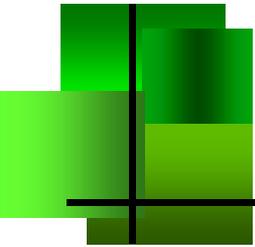
Safety Policy – Part 3

Consultation



- Employers have a duty to consult with employees on H&S matters.
- Where trade unions are recognised, consultation must take place via safety representatives and a safety committee must be set up when requested.
- Employees not represented by trade unions must also be consulted, either directly or through elected reps.
- References:
 - Health and Safety at Work etc Act 1974 section 2(4)
 - Safety Representatives & Safety Committees Regs 1977
 - Health & Safety (Consultation with Employees) Regs 1996



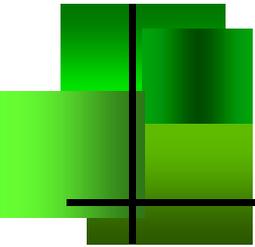


Safety Policy

Part 3 - Communication

The main methods of communicating health and safety information are:

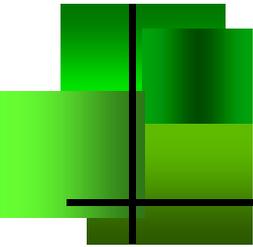
- By the use of written procedures
- By the provision of instructions
- By the provision of appropriate training



Safety Policy – Part 3

General Methods of Monitoring

- Proactive systems:
 - Involve testing, inspections and consultation procedures which look at how arrangements are operating in practice, and
 - Management control systems which ensure compliance with those arrangements
- Reactive systems:
 - Involve the investigation and analysis of accidents and other incidents with a view to identifying the problems which caused them



Measuring the Performance of the Safety Policy

- It is important that the safety policy is monitored and reviewed on a regular basis.
- Benchmarks need to be established against which safety performance can be measured or compared.
- Comparisons can be:
 - **Internal** – against departments within organisation.
 - **External** (competitive) – comparing the same product or service provided by direct competitors.
 - **Generic** – comparing processes with worldwide best practice regardless of industry or country.
- HSE publish annual reports, statistics and bulletins that can be used for comparison purposes.

Reviewing the Safety Policy

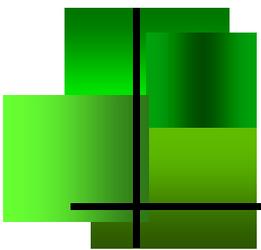
- The circumstances that should give rise to reviews:
 - Changes in organisational structure and/or key personnel.
 - A change in premises.
 - When work arrangements change or new processes are introduced.
 - When indicated by an audit or risk assessment.
 - Following enforcement action or as a consequence of the findings from an accident investigation.
 - Following a change in legislation.
 - If consultation with employees or their representatives highlights deficiencies.
 - If requested by a third party.
 - Where some time has elapsed since the policy was developed.

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Practical
Relevant



Health and Safety Policy Revision Questions





NEBOSH 8 Point Question

- (a) **Identify** the legislative requirements for employers to prepare a written health and safety policy. (2)
- (b) **Explain** why might the health and safety policy of two organisations, both undertaking similar work, be different? (6)
- (a) Section 2(3) of the Health and Safety at Work, etc. Act 1974 requires employers to prepare and keep under review a policy (statement of intent), the organisation and arrangements in force, with any amendments being brought to the attention of employees. Where there are 5 or more employees the policy must be in writing.
- (b) Because the policy is a reflection of the particular circumstances of each organisation. Thus, any variations in size, nature and organisation of operations etc. will mean that the health and safety policy will also vary.

- (a) **Identify** the 3 elements of a health and safety policy ? (2)
- (b) **Identify** the circumstances when a health and safety policy review might be held? (6)

- (a) The general statement of intent.
The organisational responsibilities for health and safety policy.
The arrangements and procedures to implement the health and safety policy aims and objectives.
- (b) Changes in structure of the organisation and/or changes in key personnel.
A change in premises.
When work arrangements change, or new processes are introduced.
When indicated by an audit or risk assessment
Following enforcement action or as a consequence of findings from accident investigation
Following changes in legislation.
If consultation with employees or their representatives highlights deficiencies.
If requested to do so by a third party.
Where some time has elapsed since the policy was developed.

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Practical
Relevant



Management of Health and Safety at Work Regulations 1999



Management of Health & Safety at Work Regulations 1999



Scope

- Risk assessment
 - Every employer shall make a suitable and sufficient assessment of the risks...to employees...and those affected by his undertaking
 - Self employed people to do their own
 - 5 or more employees: recorded in writing
- Principles of prevention
 - Avoid risks
 - Evaluate those that cannot be avoided
 - Combat risks at source
 - Adapt the work to the individual
 - Replace the dangerous by the non (or less)-dangerous etc.



Management of Health & Safety at Work Regulations 1999



- Health and Safety Arrangements
 - To have arrangements in place for health and safety
 - Planning
 - Important to:
 - Have system for planning and maintaining controls
 - Setting SMART objectives
 - Organising
 - Control
 - Monitor
 - Review
 - 5 or more employees - to be recorded in writing.



Management of Health & Safety at Work Regulations 1999



- Health Surveillance:
 - Important where health of individual could be compromised over time (chronic);
 - May be needed where:
 - You rely heavily on use of PPE, such as respiratory protection; or
 - Your rely in the integrity of the individual to do something such as job rotation when dealing with vibration hazards.
- Health and Safety Assistance
 - Employer to appoint one or more competent persons to assist in implementing H&S

Competence

- Practical & theoretical knowledge
- Experience
- Ability to spot defects, errors or omissions
- Know own limitations

Management of Health & Safety at Work Regulations 1999



- Procedures for serious and imminent danger
 - Employer to have procedures in place
 - Nominate competent persons to assist in evacuation
- Information for employees
 - Employer to provide comprehensible and relevant information on:
 - Risks identified by the risk assessment
 - Preventative and protective measures
 - Procedures for serious and imminent danger
 - Identity of individuals who assist in procedures for serious and imminent danger

Management of Health & Safety at Work Regulations 1999



- Co-operation and co-ordination
 - Where 2 or more employers share a workplace
 - Co-operate with other employers on H&S
 - Co-ordinate the measures for H&S to achieve compliance
 - Inform other employers on the risks associated with their work activity
- Capabilities and Training
 - Employers to take into account employees capability for H&S
 - Provide adequate H&S training:
 - On joining the company
 - Change of responsibilities
 - Introduction of new equipment, technology or systems of work

Management of Health & Safety at Work Regulations 1999



- Employees duties

- Use all tools and equipment in accordance with training and instruction received
- Inform the employer of any work situation which represent a serious and immediate danger
- Inform the employer of any short-comings in the employer's protection arrangements

- Temporary Workers

- Employer to provide comprehensible information
 - Any special qualification or skills required
 - Any health surveillance required

Management of Health & Safety at Work Regulations 1999



- Risk assessment for new and expectant mothers
 - Assessment required where there is a risk to the mother or the baby
 - From processes
 - Working conditions
 - Physical, biological or chemical hazards
- Protection of young persons
 - Employer to protect young persons from risks associated with
 - Lack of experience, immaturity and absence of awareness
 - No employer to employ young persons where
 - Work beyond physical or psychological capacity
 - Exposed to toxic or carcinogenic material
 - Extreme heat and cold
 - Noise and vibration



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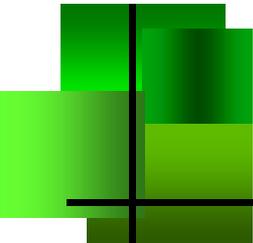


The Risk Assessment Process



Suitable and Sufficient?

- Suitable and sufficient does not mean perfect.
- You need to be able to show:
 - A proper check was made (identification of hazards)
 - You asked who might be affected (population exposed)
 - You dealt with all obvious significant hazards taking into account the number of people who could be involved (severity, population, likelihood and frequency).
 - The precautions are reasonable, and the remaining risk is at an acceptable level.



Other Regulations Requiring Risk Assessment



- Control of Substances Hazardous to Health Regs 2002
- Health and Safety (Display Screen Equipment) Regulations 1992
- Manual Handling Operations Regulations 1992
- Ionising Radiation Regulations 1999
- Regulatory Reform (Fire Safety) Order 2005
- Control of Noise at Work Regulations 2005
- The Control of Vibration at Work Regulations 2005
- Control of Asbestos Regulations 2012

Aims and Objectives of Risk Assessments

- Identification and control of risk is vital in the promotion of a safe workplace and safe system of work.
- Risk management may be defined as the eradication or minimisation of adverse effects of the pure risks to which an organisation is exposed.
- Pure risk will only lead to losses within an organisation if not controlled.
- To ensure legal compliance.

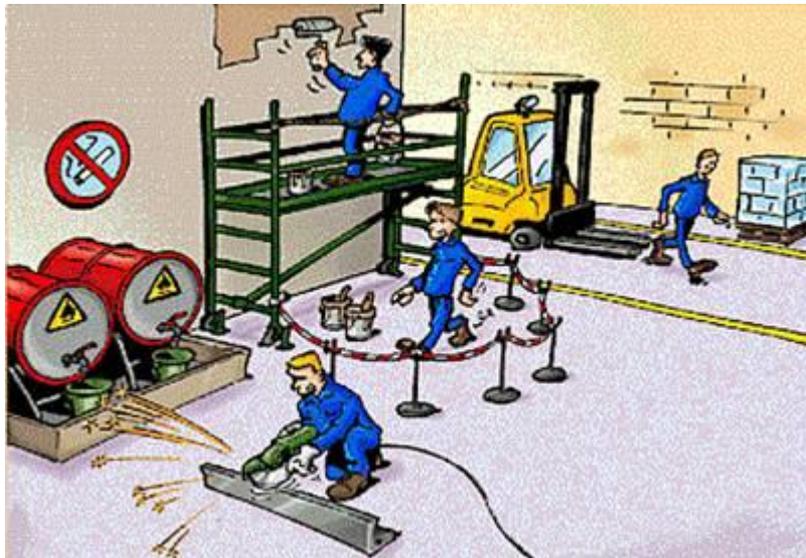
Risk Assessment (HSG 65)

- Methods are used to decide on priorities and set objectives for eliminating hazards and reducing risks.
- Wherever possible risks are eliminated through selection and design, equipment and processes.
- Where risks cannot be eliminated they are minimised by the use of physical controls, systems of work and, as a last resort, PPE.

Risk Assessment

What is a Hazard?

- Anything with the potential to cause harm

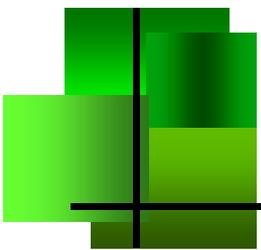


What is Risk?

- The likelihood that the harm from the hazard will be realised

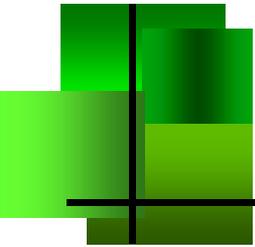
Accident (Injury) Risks?

- Contact with moving machinery or material being machined
- Struck by moving, flying or falling object
- Hit by a moving vehicle
- Struck against something fixed or stationary
- Injured while handling, lifting or carrying
- Slips, trips and falls on the same level
- Falls from height
- Trapped by something collapsing



Accident (Injury) Risks continued

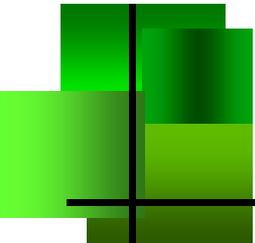
- Drowned or asphyxiated
- Exposed to, or in contact with a harmful substance
- Exposed to fire
- Exposed to an explosion
- Contact with electricity or an electrical discharge
- Injured by an animal
- Physically assaulted by a person
- Other kind of accident



Categorisation of Health Risks



- Chemical
 - Bleach, solvents, cement
- Biological
 - Legionella, hepatitis, salmonella
- Physical
 - Slippery walkways, moving machine parts, traffic, noise
- Psychological
 - Stress, violence,



Acute and Chronic Health Effects

- Acute

- The effects are usually immediate or happen within a short space of time
- They are often reversible.

- Chronic

- These effects often build up over a longer period of time.
- They may be irreversible.

The 5 Steps of Risk Assessment

- 1 Identify the hazards
- 2 Identify who may be harmed
- 3 Evaluate the risk and decide on risk control measures
- 4 Record and Implement
- 5 Monitor and Review



Who should carry out Risk Assessments?

- The team should be selected on the basis of competence
 - Knowledge of the particular area within the organisation under examination
 - Team leader should have relevant health and safety experience and relevant training in risk assessment
 - Other team members selected on the basis of experience, technical knowledge
 - knowledge of industry best practice, relevant standards and regulations, MSDS, handbooks, health and safety files etc.

Successful
Practical
Relevant



Risk Assessment Step 1

Hazard Identification



Identifying Hazards

- Only significant hazards which could result in serious harm to people should be identified – ignore trivial hazards
- Hazards are sources of harm they can be any
 - thing
 - living organism
 - way of working
- Risk when hazard and people come together
 - could result in harm to people.

Successful
Practical
Relevant



Risk Assessment Step 2

People at Risk

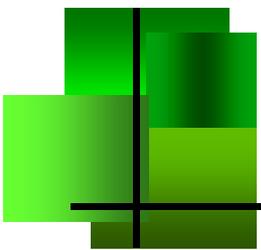


Step 2 – Those at Risk?

- Yourself
- Other Company employees
- Employees who work alone and/or in isolated areas
- Unaccompanied children
- People who are unfamiliar with the premises e.g. members of the public
- Other contractors
- Sensory impaired due to alcohol, drugs or medication
- Other people in the immediate vicinity of the activities who are not actually involved
- People with disabilities
- Uninvited visitors

Young Persons

- Persons left school but not yet attained their 18th birthday
- Immaturity
- Lack of experience of the workplace
- Tendency to subject to peer pressure
- Special risk assessments must be completed before work start which identifies
 - Details of work activity, equipment and substances
 - Prohibited equipment and processes
 - Health and safety training to be provided
 - Details of supervision required

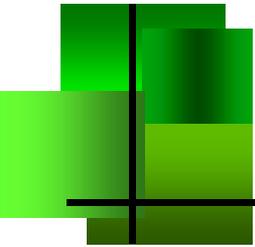


New and Expectant Mothers

- Factors that may increase the risk to this group:
 - Manual handling
 - Chemical/biological hazards
 - Ionizing radiation
 - Passive smoking
 - Temperature variations
 - Prolonged standing or sitting
 - Stress and violence to staff

Workers with a Disability

- People with hearing problems may not hear warning signals (fire alarm, vehicle movements)
- Wheelchair users require clear aisles, routes to fire exits and straight access to assembly points



Lone Workers – Considerations?

- Does the workplace present a particular risk to one person?
- Can all equipment and substances be handled safely by one person?
- Is violence from others a risk?
- Would women or young persons be particularly at risk?
- Is the worker medically fit and suitable to work alone?

Successful
Practical
Relevant



Risk Assessment Step 3

Evaluation of Risk
Level



Risk Rating

- Risk rating should include
 - Severity of the outcome
 - Likelihood of the event occurring
 - Frequency
 - with which the operation is carried out
 - The population exposed to the risk
- Risk Rating = Severity x Likelihood

3 x 3 Risk Assessment Likelihood and Severity



Likelihood

Low	= no or slim chance
Medium	= might well occur
High	= will almost certainly occur

Severity

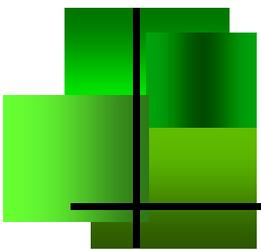
No/Slight	= none or 1 st aid injury
Minor	= 7-day reportable
Major	= serious or specified reportable injury

3 x3 Risk Assessment Risk Rating Table

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Major	Medium Risk	High Risk	High Risk
Minor	Low Risk	Medium Risk	High Risk
No/slight	Low Risk	Low Risk	Medium Risk
	Low	Medium	High

Likelihood



5 x 5 Severity of the Outcome

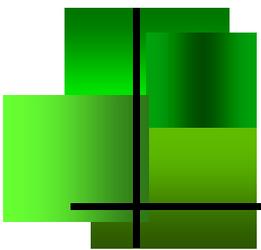
- 1 No harm or illness
- 2 First Aid injury
- 3 7-Day reportable
- 4 Specified injury/ illness
- 5 Fatality

5 x 5 Likelihood of the Event

- 1 Very unlikely
- 2 Possible
- 3 Probable (50/50 chance)
- 4 Very likely
- 5 Almost certain

Risk Multiplication Table

Severity	5	5	10	15	20	25
	4	4	8	12	16	20
	3	3	6	9	12	15
	2	2	4	6	8	10
	1	1	2	3	4	5
		1	2	3	4	5
		Likelihood				



Designating the Risk Rating

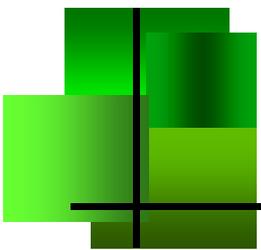
- Red (15 and above):
 - High risk operations, totally unacceptable
 - Work not to be undertaken until risk level reduced so far as practicable
- Yellow (between 5 and 12):
 - Medium risk operations
 - Apply controls as far as is reasonably practicable
- Green (up to 4):
 - Low risk operations

Risk Control Measures

- Some controls already in place – need to assess their effectiveness
- Advice on control measures:
 - Legislation
 - ACoP's and HSE Guidance
 - Trade Associations, Trade Unions, Employers' Organisations
 - Journal and publications
- Ensure that existing controls are working properly

Hierarchy of Risk Control

- MHSWR 1999 Schedule 1
 - Avoid risks
 - Evaluate risks which cannot be avoided
 - Combat the risks at source
 - Adapt the work to the individual
 - Design of workplace
 - Choice of methods of work
 - Alleviate monotonous work
 - Alleviate work at pre-determined rate



Hierarchy of Risk Control continued

- Adapting to technical progress
- Replacing the dangerous by the non-dangerous or less dangerous
- Developing a coherent overall prevention policy which covers technology, organisation of work, work conditions, social relationships and the influence of factors relating to the working environment
- Giving collective measures priority over individual protective measures and;
- Giving appropriate instruction to employees

Risk Control Hierarchy

- The usual hierarchy is:
 - Eliminate
 - Substitute (e.g. a safer process or substance)
 - Reduce e.g.
 - Engineering controls (guards, isolation, insulation)
 - Reduced or limited time exposure
 - Good housekeeping
 - Safe Systems / permit-to -work
 - Welfare
 - PPE
 - Information/ Training
 - Monitoring and supervision

Successful
Practical
Relevant



Risk Assessment Step 4

Make a Written Record
and Implement



Step 4 - Make a Written Record

- Where 5 or more people are employed the significant findings of the assessment must be recorded.
- No prescribed form
- Type of record will vary from organisation to organisation
- Record must be suitable and show the process taken in reaching the Risk Assessment findings

Recording Requirements

- Basic information:
 - Date, location, assessors
 - Activity, equipment, people etc.
 - Hazards, risk ratings
 - Existing control measures
 - Proposed control measures
 - Residual risk ratings

Developing an Action Plan

- Where shortfalls in control measures are identified – develop an action plan.
 - Priority based on risk.
 - Distinguish between priority and time scale.
 - Time bound
 - A system to check that actions have been completed.

Record Keeping

- Keep written records for future reference.
 - Inspectors may wish to see them.
 - May be used in civil actions.
 - Demonstrates that you have complied with the law.
 - Act as a reminder to keep a check on things.
 - You can refer to other documents (policy, company rules, procedures and work instructions).

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Risk Assessment Step 5

Monitoring and
Review



Monitoring

- Active Monitoring
 - H&S Inspections
 - Pre-use checks
 - Safety tours
 - Hazard spotting exercises
 - Surveys
 - Audits
- Reactive Monitoring
 - Investigation
 - Internal
 - MD
 - Safety Officer
 - Safety Rep
 - External
 - Enforcing Authority
 - Courts
 - Victim

Feedback Loop

Step 5 – Reviewing

Legal requirement to review as/when necessary

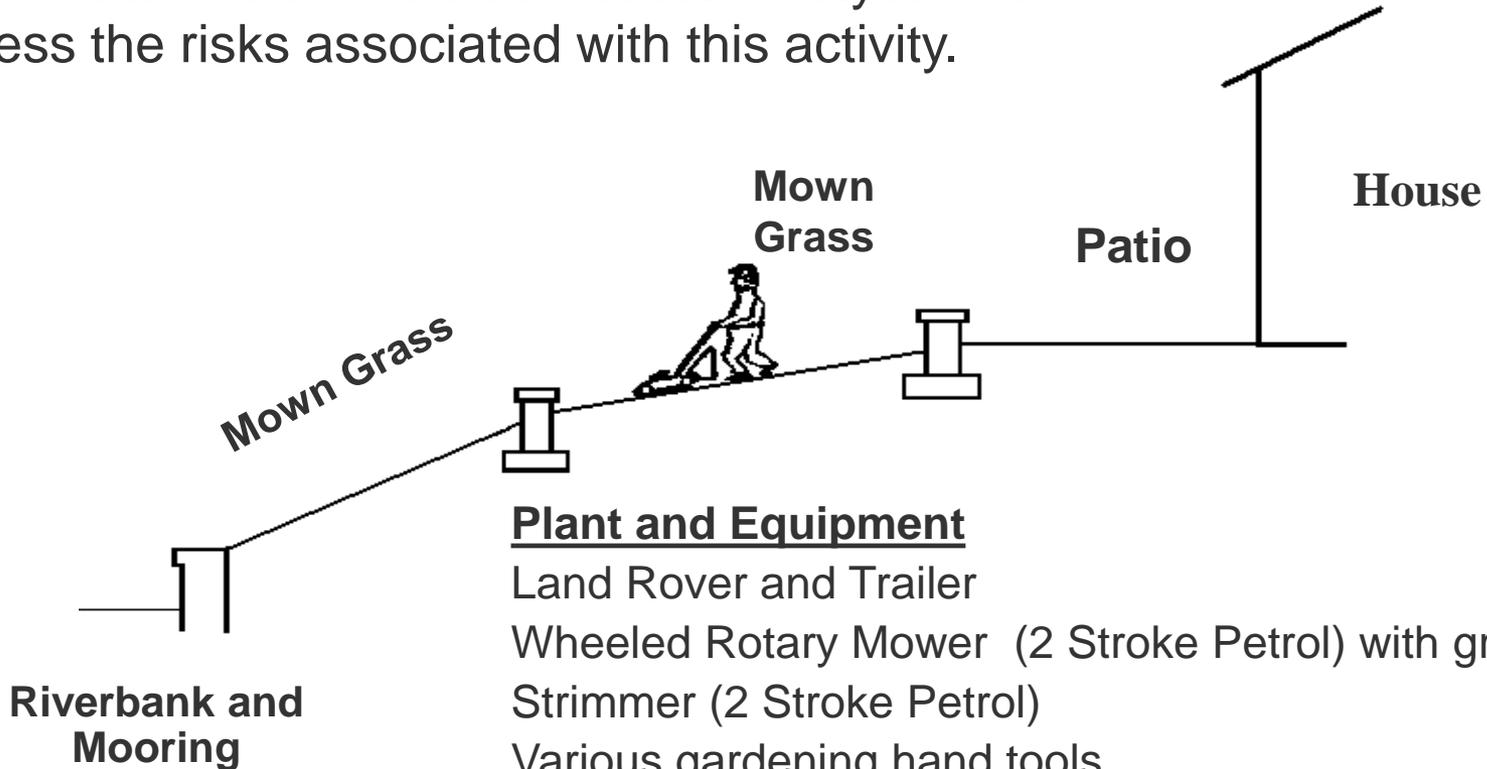
- Significant change such as?
 - Technology
 - Legislation
 - Personnel
 - Up-date in best practice
 - Improved workplace precautions
 - Suspect no longer valid - minor accidents/near misses

Delegate Exercise

- Using the proforma you have been given and for the activity described on the next slide:
 - Identify the hazards
 - Decide who could be at risk
 - Rate the risks before controls have been implemented using the 5 x 5 scoring system (remember to use all points in the system)
 - Put together controls to reduce the risks and then rescore the activity to determine the residual risk

Exercise

A self employed gardener is regularly contracted to mow the lawns at riverside house. Analyse and assess the risks associated with this activity.



Plant and Equipment

Land Rover and Trailer

Wheeled Rotary Mower (2 Stroke Petrol) with grass box

Strimmer (2 Stroke Petrol)

Various gardening hand tools

PPE

Cotton Overalls

Safety Footwear

Heavy Duty Gardening Gloves

Ear Muffs

Practice Question

An employee who works on a production line has notified her employer that she is pregnant.

Outline the factors that the employer should consider when undertaking a specific risk assessment in relation to this employee. (8 pts)

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Principles of Control



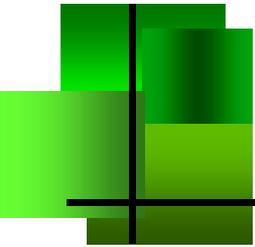
General Principles of Prevention

Need to Memorise



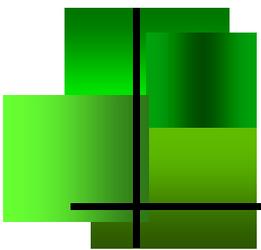
- The MHSWR 1999 specifies the principles of prevention for control measures:
 - Avoiding risks (wherever possible)
 - Evaluating risks that cannot be avoided
 - Controlling risk at source
 - Adapting work to the individual
 - Adapting to technical progress
 - Replacing the dangerous by non-dangerous or less dangerous
 - Developing a coherent overall prevention policy
 - Give collective measures priority over individual measures
 - Giving appropriate training, information and supervision to employees and others





General Hierarchy of Control

- The usual hierarchy of risk control can be further condensed and simplified to:
 - Elimination/Substitution
 - Reducing Exposure
 - Isolation/Segregation
 - Controls - Engineering
 - Personal protective equipment (PPE)
 - Discipline - Supervision



Controlling **Health** Risks

- Types of health risk from work activities include:
 - Skin contact with irritant substances
 - Inhalation of respiratory sensitizers
 - Badly designed workstation
 - High noise levels
 - Exposure to vibration
 - Exposure to ionising and non-ionising radiation
 - Infections from inhalation or being contaminated by microbiological organisms
 - Stress causing mental and physical disorders

Controlling Health Risks

- Control hierarchy for exposure to substances hazardous to health:
 - Change process to eliminate need for hazardous substance
 - Replace substance with a safer material
 - Use substances in a safer form (e.g. liquid or pellets instead of powders to prevent dust)
 - Totally enclose process
 - Partially enclose process and use local exhaust ventilation (LEV)
 - Provide high quality general ventilation (if exposures do not breach the exposure limits)
 - Use safe systems of work and procedures to minimize exposure
 - Reduce the number of people exposed and/or the duration of their exposure

Use of Safety Signs in Control

- The standards for signs are international so that they are instantly recognisable throughout the world.
- The UK standards for safety signs are laid down in the Health and Safety (Safety Signs and Signals) Regulations 1996 (as amended by the MHSW Regs. 1999)
- The regulations apply to the provision of health and safety signs and they are divided into 4 categories:
 - Prohibition
 - Warning or Hazard
 - Mandatory Action
 - Safe Condition

(NB There is a category for Fire-Fighting Equipment)

Health and Safety Signs

Warning or Hazard

- These indicate the need to be careful and take precautions.
- They are triangular, the dominant colour yellow (at least 50%).
- They have a black symbol or pictogram on a yellow background with a black border.



Health and Safety Signs

Mandatory Action

- These direct the taking of specific action or behaviour.
- They are circular, with a solid blue background and a white pictogram.



Health and Safety Signs

Prohibition

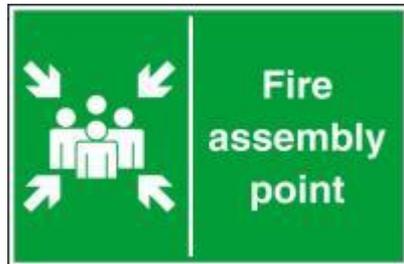
- These are directed at stopping dangerous behaviours.
- They are circular, the dominant colour being red (at least 35%).
- They have a black symbol or pictogram on a white background with a red border and a red diagonal crossbar.



Health and Safety Signs

Safe Condition

- These identify safe behaviour or places of safety.
- They are rectangular or square with dominant colour being green (at least 50%).
- They have a white symbol or pictogram on a green background.



Health and Safety Signs

Fire-Fighting Equipment

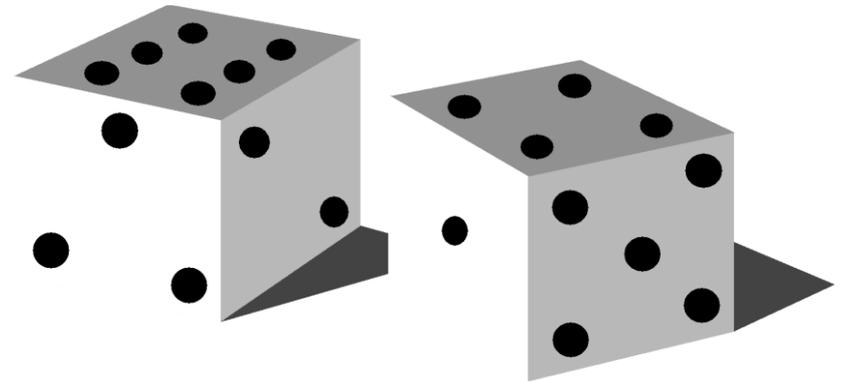
- These signs identify particular types of equipment and locations.
- They are rectangular or square with dominant colour being red (at least 50%).
- They have a white symbol or pictogram on a red background.



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Human Factors in Safety



What are Human Factors?

- Human perception
- Motivation
- Attitude
- Personality
- Behaviour
- Interaction
- Mental ability
- Physical ability

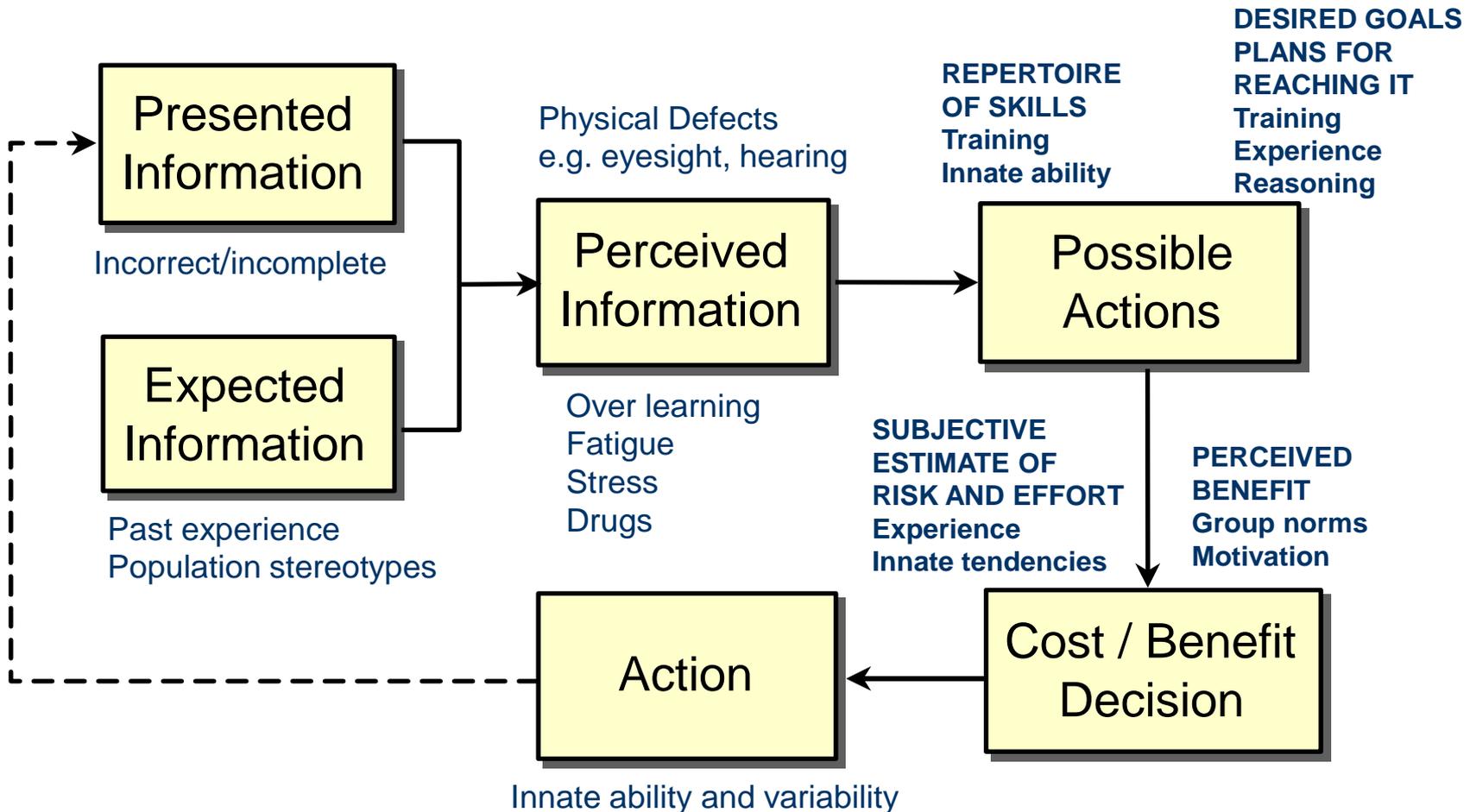
Why are they important?

- Accidents are caused by unsafe acts/conditions
- Most are caused by unsafe acts by people
- People not things cause accidents

Chernobyl Disaster 1986

- Human Factor a major part
- Operational rules ignored
- Tried to take 'short cut'
- Underestimated possible outcomes

Hale and Hale Model



Motivation

- Can be seen as the driving force behind the way a person acts in order to achieve a goal.
- Motivating factors include:
 - involvement
 - recognition
 - job satisfaction

Perception

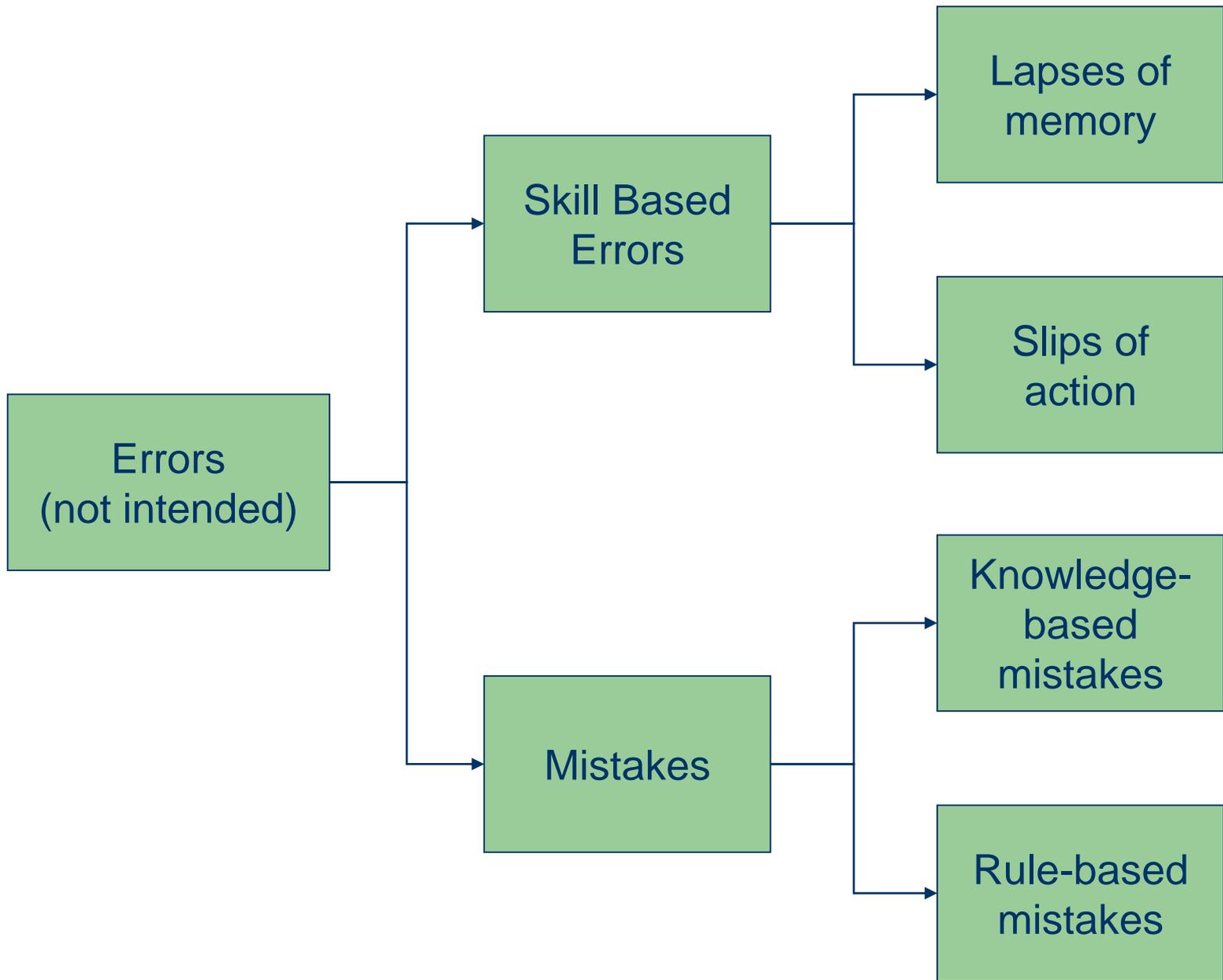
- Perception is the way a person views a situation.
- Perception will be affected by such factors as experience, skills, attitude.
- One person may perceive a situation as dangerous where another may not.

Attitude

- The tendency to respond in a particular way to a given situation
- May be affected by background, culture, peer group beliefs and experience
- Can be deep seated, interdependent and difficult to change.

Types of Human Error

- Skill based errors:
 - Lapses of memory
 - Slips of action
- Mistakes:
 - Knowledge based
 - Rule based
- Mis-perceptions
- Mistaken Priorities
- Wilfulness (violations)



Lapses of Attention

- Intentions are correct
- Competing demands on attention
- Highly trained and highly skilled people may be more likely to make a slip

Mistaken Actions

- Doing the wrong thing believing it to be right
- The operator knows what needs to be done but chooses the wrong method

Mis-perception

- Limited capacity to attention
- Leads to tunnel vision
- Preconceived diagnosis overrules information
- Interpretation of instruments and conditions

Mistaken Priorities

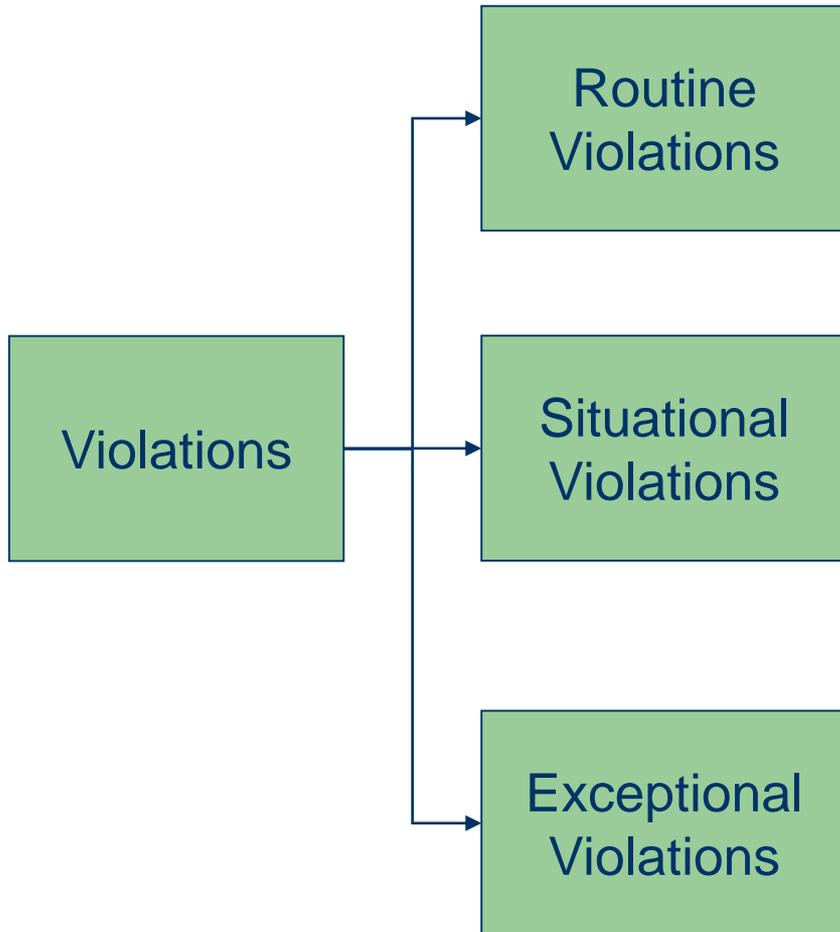
- Money
- Efficiency
- Output
- Speed
- Ease
- Last-Safety

Wilfulness (violation)

- Disregarding safety rules
- Short cuts
- Benefits outweigh risk
- Removal of guards
- Tampering with safety devices

Violations

Violations are divided into 3 categories:



When breaking a safety rule or procedure is the normal way of working.

Occur when particular job pressures at particular times make rule compliance difficult.

Rarely happen and usually occur when a safety rule is broken to perform a new task

How do we prevent human error?

- These three factors influence behaviour:
 - The Organisation
 - The Job
 - Personal Factors

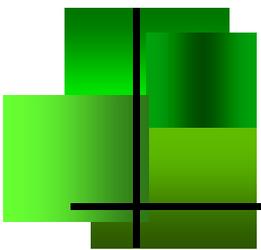


Organisation

- Need a positive safety culture
- Senior managers setting good examples
- Monitoring safety
- Giving supervisors adequate authority on safety

The Job - Ergonomics

- The job needs to be designed ergonomically
- All people are differing shapes and sizes
- Consider mental and physical aspects



The Job – Ergonomics continued

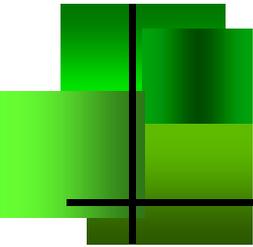
- Identify the task
- Evaluate the decisions made by the operator
- Layout of control panels
- Design of instructions
- Lighting, noise etc.
- Shifts, work patterns

The Individual

- Motivation
- Training / Education
- Work Patterns
- Consultation
- Involvement
- Ownership

Effective Communication

- Many problems in health and safety arise from poor communication.
- Communication can be defined as operating using 3 channels or systems:
 - Downward communication.
 - Upward communication.
 - Horizontal communication.
- There are also 3 basic methods of communication:
 - Verbal.
 - Written.
 - Graphic.



Communication - Choosing a Medium

- Consider:
 - Personal or impersonal
 - Cost
 - Is feedback needed
 - Will it get through?
 - Accuracy and speed
 - Records needed?
 - Credibility of information

Barriers of Communication

- Medium
 - slang, accent, noise
- Sender
 - attitude, culture, emotions, background
- Receiver
 - needs, expectations, perception, anxieties

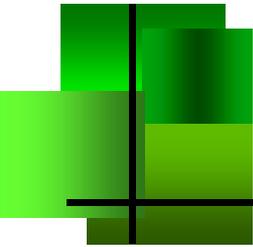
Health and Safety Training

Employers duty to provide:

- On recruitment
- On being transferred
- Changes in risks
- Changes in responsibilities
- Changes in equipment or technology
- Changes in work systems
- Whenever update is necessary

Types of Health and Safety Training

- Induction Training (a record should be kept of this):
 - Provided to new employees, trainees and possible contractors.
 - Although it will cover many topics, it must include health and safety.
- Job-Specific Training
 - Ensures employee undertakes his job in a safe manner.
- Supervisory and Management Training
 - In-depth induction training given managers and supervisors
- Specialist Training
 - Examples include: first aid; fire prevention; crane operators etc.



External Influences on Health and Safety



- External influences on health and safety standards include:
 - Social Expectations
 - Legislation and enforcement
 - Insurance companies
 - Trade unions
 - Economics
 - Commercial stakeholders

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Safe Systems of Work



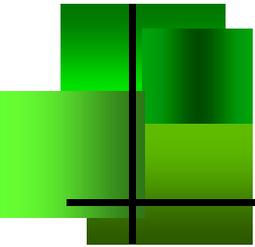
Safe System of Work

- Definition

- the integration of personnel, articles and substances in a suitable environment and workplace to produce and maintain an acceptable standard of safety
- must consider foreseeable emergencies and provision of rescue facilities

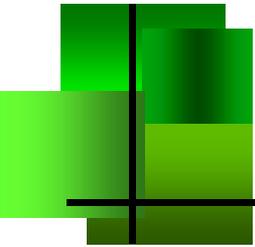
Why is it necessary?

- Health and Safety at Work Act 1974
- s.2(2)(a)
 - It shall be the duty of the employer to ensure the provision and maintenance of plant and ***systems of work*** that are, so far as is reasonably practicable, safe and without risks to health
- Economic reasons
- Ethical / moral reasons



Development of Safe Systems

- Analysing tasks, identifying hazards and assessing risks:
 - What is used and how it is used
 - Where the task is carried out
 - Who does it
 - How the work is done
 - Unexpected events
- Introducing controls and formulating procedures:
 - Where there are extreme risks, ‘permit-to-work’ may be used
- Instruction and training in the operation of the system
- Monitoring and reviewing



Development of Safe Systems



Analysis:

- Thorough analysis of the job required
- Formal methods used for high risk operations
 - HAZOP (Hazard and Operability Study)
 - FTA (Fault Tree Analysis)
 - FMEA (Failure Modes and Effects Analysis)
- Where there is lower potential loss
 - JSA (Job Safety Analysis)

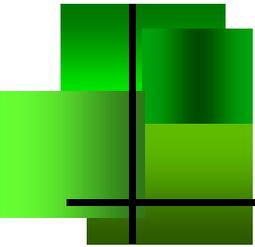


Components of a Safe System of Work



Analysis:

- People
- Machinery, plant and equipment
- Materials being used
- Environment
- Place of work
- Job sequence
- Any documented procedures
- Any additional training requirements



Components of a Safe System of Work

- Management of the system
 - need for written procedure
 - design of the system
 - documentation to be consulted
 - consultation with operatives
 - instruction & training requirements
 - monitor & review
 - maintenance of the system

Safe System of Work Lone Working



- Hazard encountered may be the same as colleagues working together, but risks higher, e.g. lifting a heavy object without anyone to assist
- Being out of touch, they cannot notify colleagues of any problems, or receive any warnings.
- They might to have access to normal facilities available in the workplace (first aid, fire, welfare).
- If travel is involved this in itself introduces risks.

Safe System of Work Lone Working



- Technical controls:
 - Ensuring appropriate communications
 - The provision of first aid and fire extinguishers
- Procedural controls:
 - Logging of movements
 - Ensuring necessary precautions are taken before entering other premises etc
- Behavioural controls:
 - PPE appropriate to the hazards

Safe System of Work Violence



- Measures should be based on risk assessment
- Might involve work either at their usual place of work or when away from base.
- For mobile workers, consideration should be given to whether lone working presents unacceptable risks.

Safe System of Work Violence



- Irrespective of location, consideration should be given to:
 - Siting of car parks
 - Lighting of external areas
 - Trained security staff and consultation with police
 - Restricting access and physical barriers at workstations
 - Equipment such as CCTV, alarms and panic buttons
 - Procedures for handling money
 - Stress reduction techniques
 - Training in confrontation management
 - Alcohol and drugs control
 - Out-of-hours procedures
 - Violence at work policy
 - Disciplinary procedures
 - Provisions for junior or inexperienced staff, or anyone who might be specially at risk
 - Incident reporting procedures

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Relevant



Permit to Work



Permit to Work

- Definition

- a formal safety control system designed to prevent accidents when work has a foreseeable high risk content
- precautions may be numerous / complex
- sets out work to be done
- sets out precautions to be taken
- predetermines a safe drill
- provides a clear record that all foreseeable hazards considered

Typical Work Requiring a Permit to Work



- The types of hazardous situations which permit-to-work systems should be used include:
 - Hot work (concerned with preventing fires/explosions)
 - Work on electrical systems (to ensure systems are safe before and during the work process)
 - Confined spaces (to avoid risks such as asphyxiation from gas, fume or vapour, drowning, entrapment etc.)
 - Plant maintenance (avoidance of injury from machinery being started up while work is in progress)

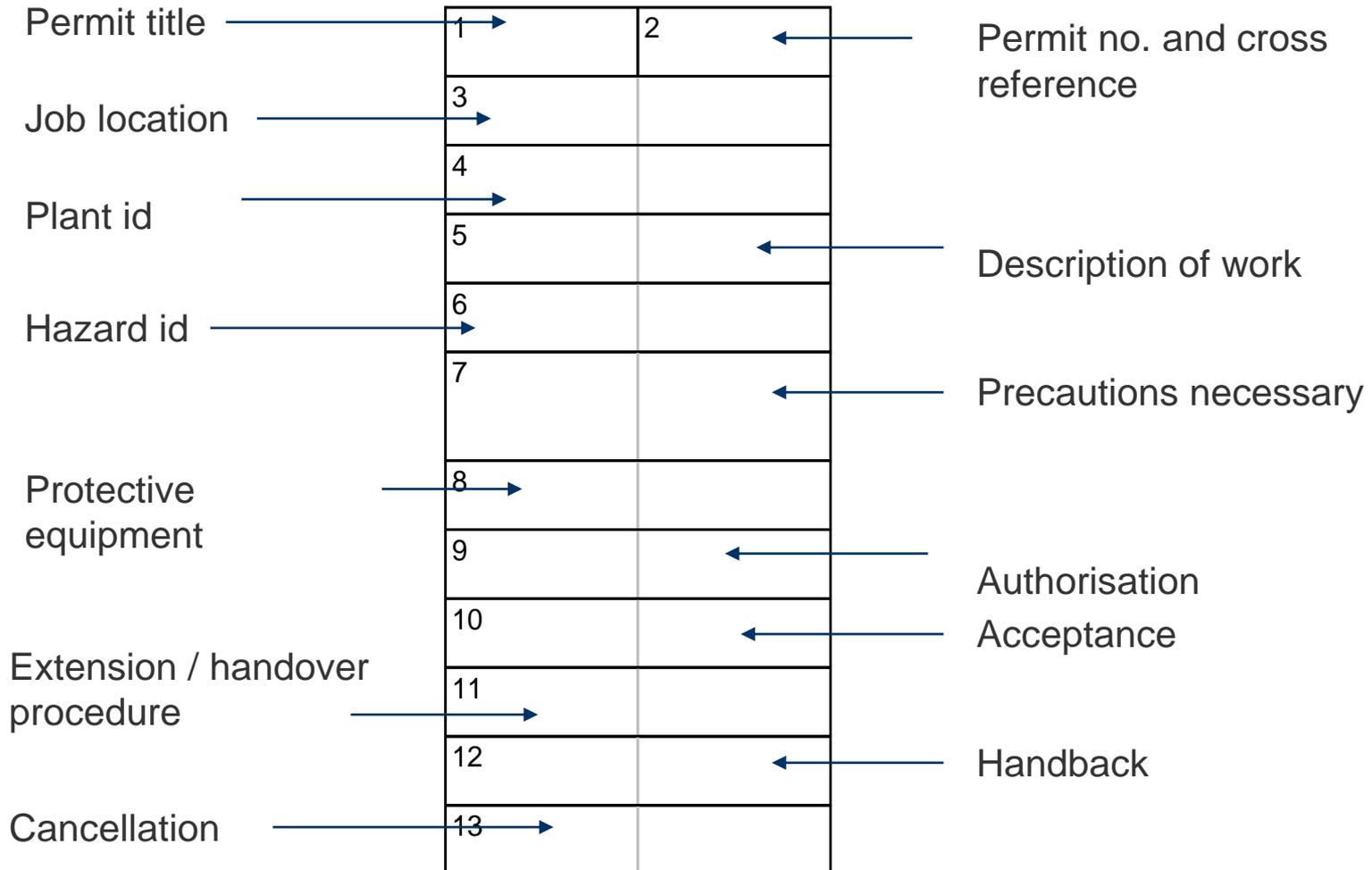
Permit to Work

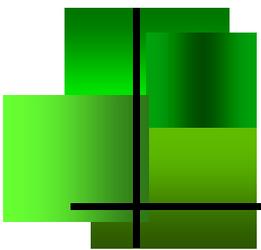
- High risk work activities
- Ensures
 - work planned safely
 - recorded in writing
 - precautions in place
- Considerations
 - who and when
 - emergency action
 - time period
 - authorised person

The Permit

- Should include:
 - clear identification of work and hazards
 - precautions to be taken before work
 - precautions for hazards introduced by work
 - procedures for emergencies
 - hand-back procedures
 - do time limitations apply
 - cross-referencing where two permits
 - is the permit displayed?

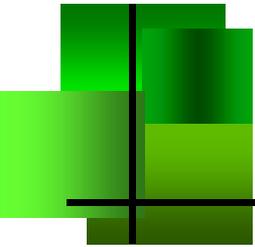
Parts of the Permit





Permit-to-Work - Remember

- Signatures must be legible
- **Permits save lives**
 - give them proper attention



Summary - Safe Systems of Work

Risk Assessment - Method Statement - Permit to work

- Co-ordination of work
- Plant & equipment - layout
- Method of using machines
- Instructions to workers
- Warnings and instructions
- Emergency plans
- Monitoring scheme to ensure compliance

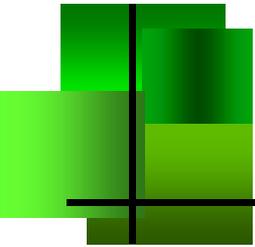
Practice Question

1. **Outline** the contents of a typical permit-to-work. (8 pts)

2. **Outline** the:

Functions of a permit-to-work form. (2 pts)

Elements that should be included in a typical permit-to-work form. (6 pts)

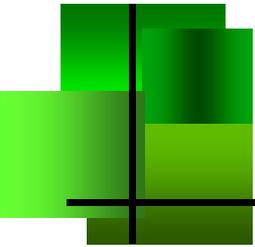


Confined Spaces – Permit to Work

Definition ?

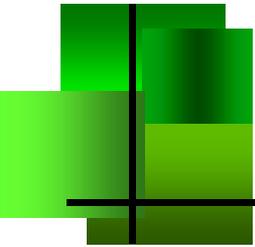
a place which is substantially,
though not always entirely,
enclosed; and

a place where there is a
reasonably foreseeable risk of
serious injury from hazardous
substances or conditions



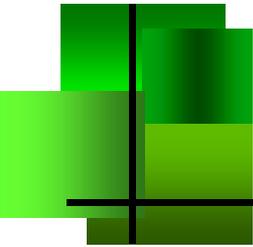
Typical confined spaces found in construction work?

- Chamber – cellar, tunnel
- Tank – storage tanks
- Silo – used for storing crops
- Pit – excavation or trench
- Pipe – carry liquid or gas
- Sewer – used to carry waste
- Flue – exhaust chimney
- Well – deep water source



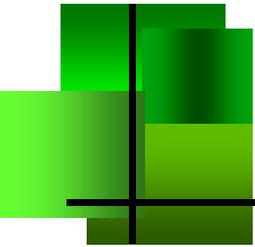
Confined Space - Hazards

- Ingress of toxic gases and vapours
- Flammable and explosive atmospheres
- Oxygen deficiency leading to suffocation
- Restricted working space and physical discomfort
- Excessive temperature
- Falls
- Machinery
- Noise
- Poor lighting



Confined Space Safe System of Work

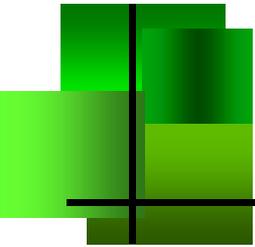
- Rescue & resuscitation equipment and procedures
- Competence of workers and rescue team
- Fire fighting procedures
- First aid arrangements
- Isolation of plant & equipment
- Cleaning and purging of the space
- Air monitoring before and during entry
- Wearing of a rescue set and harnesses
- Communications equipment
- Lighting systems (intrinsically safe)



Summary - Safe Systems of Work

Risk Assessment - Method Statement - Permit to work

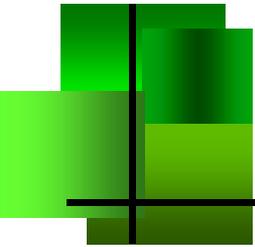
- Co-ordination of work
- Plant & equipment - layout
- Method of using machines
- Instructions to workers
- Warnings and instructions
- Emergency plans
- Monitoring scheme to ensure compliance



Sources of Health and Safety Information



- Internal:
 - Accidents
 - Ill-health/absence records
 - Inspection, audit and investigation reports
 - Maintenance records.



Sources of Health and Safety Information



- External:
 - Manufacturers Data
 - Legislation
 - EU
 - HSE and its publications
 - Trade Associations
 - International, European and British Standards
 - International Labour Organisation and other authoritative texts
 - IT Sources

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Relevant



Emergency Procedures



Emergency Procedures

What possible emergencies will need to be considered?

- Fire
- Severe weather and flooding
- Gas explosion
- Plant
- Pressure vessels
- Explosions - bomb threat
- Chemicals
- Aircraft accident
- etc.

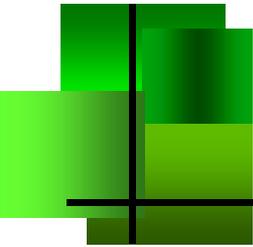
Pre-Disaster Action

- Appoint key personnel
- Identify control centre
- Prepare emergency kits
- Identify communications
- Nominate muster points
- Consider welfare during an emergency
- Consider PR and media

Pre-Disaster Action

Identify contacts:

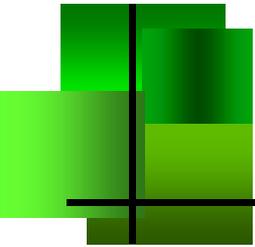
- Police, Fire, Ambulance
- Utilities:
 - Electricity
 - Gas
 - Water
- Local Authority
- HSE
- Insurance



Emergency Procedures Should Include



- Clear written policies, designating a chain of command with names of those responsible for making decisions, monitoring response and returning operations to normal
- Names of those who are responsible for assessing risk and who should be notified for various types of emergency
- Specific instructions for shutting down equipment and production processes, and business activities
- Evacuation procedures, assembly points and muster checks
- Procedures for employees who shut down critical operations before evacuation
- Specific training and practice schedules
- The means of reporting fires and other emergencies



The Disaster/Emergency Actions

- Crisis management
- First response - alarms, evacuation
- Summon emergency services
- Personnel management - trace movements
- Communications management - incoming and outgoing
- PR and media

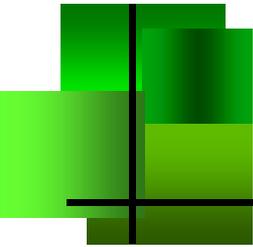
Successful
Practical
Relevant



NEBOSH National General Certificate

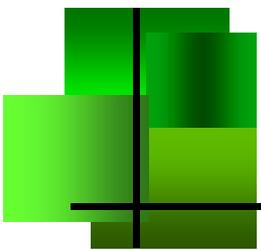
Health and Safety
Management Systems -
Organising
Element 2





Roles and Functions of Health and Safety and Other Advisors

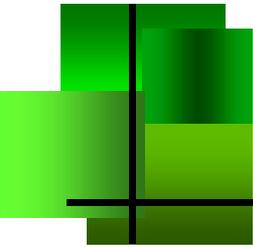
- One or more competent persons must be appointed to help managers comply with their duties under H&S law.
- In large organisations, can be staff employed in a full-time capacity with own department.
- In smaller organisations, may be carried out on a part-time basis by staff have been specially trained in their area of responsibility.
- Most organisations also use external consultants to help in certain circumstances.



Competent Person - Definition



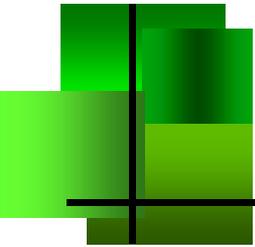
- Theoretical and practical knowledge;
- Experience;
- Ability to spot defects, errors and omissions;
- Know their own limitations; and
- Other qualities to enable them to implement the above measures;



Number of Competent Persons

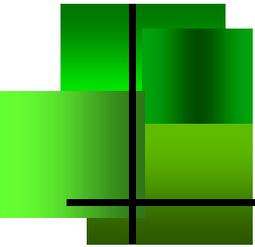
Factors to consider:

- Nature of organisation
- Size - number of employees
- Geographical spread
- Team of specialists
- Associated hazards and risks
- Generalist with specialist support
- Internal or external (consultants)



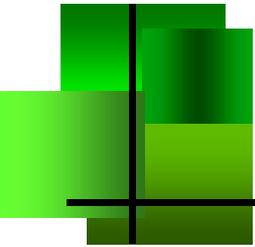
H&S Competent Person Role

- Advice on policy content
- Co-ordinate implementation of policy
- Support management in their task
- Advice on PPE
- Promote safety
- Collect & communicate information



H&S Competent Person Role

- Investigate accidents
- Member of safety committee
- Liaison with safety agencies
- Advice on legislation
- Identifying training needs



Health and Safety Advisers

- Need to be competent;
- Keep themselves up to date;
- Know how to interpret the law;
- Actively participate in establishment and maintenance of the H&S management system.
- Develop and maintain reporting procedures;
- Ensure that senior managers get a true picture of how well health and safety is being managed; and
- Present their advice independently and effectively.

Successful
Practical
Relevant

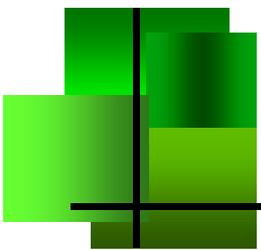


Consultation



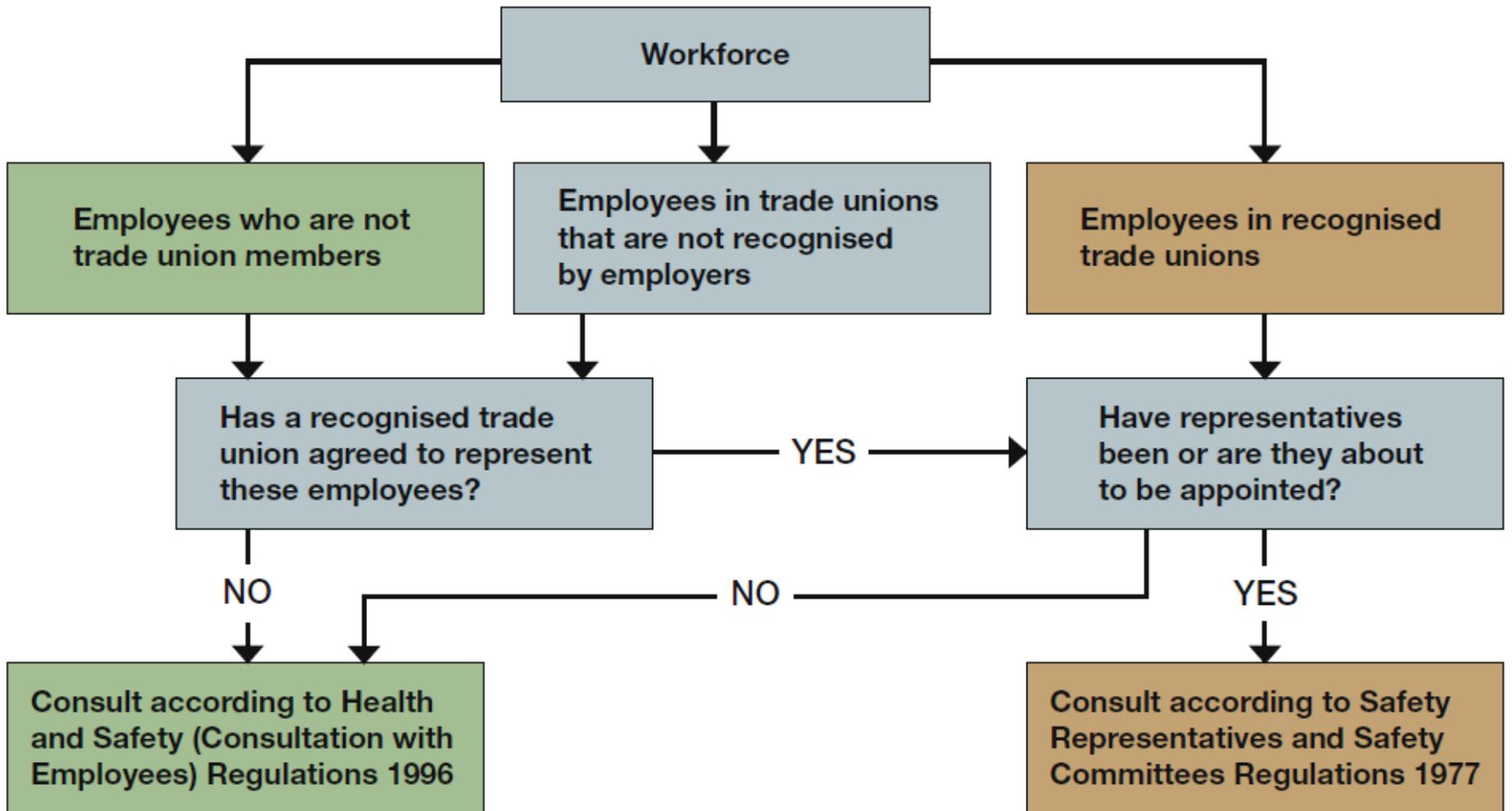
Consultation

- Involves employers not only giving information to employees, but also listening to and taking account of what employees say before making any H&S decisions.
- How should they consult with employees?
 - Directly; or
 - Through a representative:
 - Trade Union Appointed Safety Representatives (Reps); and/or
 - Representatives of Employee Safety (ROES).



Consultation with Employees

- Employers have a duty to consult with employees under:
 - Section 2(6) of the Health and Safety at Work etc Act 1974
 - Safety Representatives Safety Committees Regulations 1977
 - The Health and Safety (Consultation with Employees) Regulations 1996.



Successful
Practical
Relevant

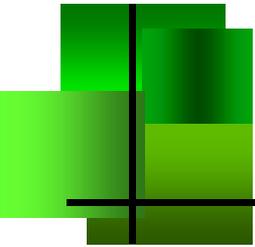


Safety Representatives Safety Committees Regulations 1977



RISK

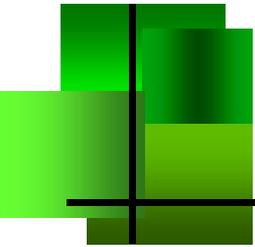




Safety Representative - Functions

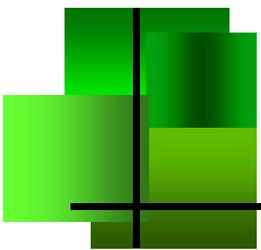


- Investigate hazards and dangerous occurrences
- Examine the causes of accidents;
- Investigate employees complaints regarding HSW;
- Make representations to the employer on such matters;
- Carry out inspections of the workplace (caveats);
- Represent employees in consultations with HSE
- Receive information from inspectors
- Attend safety committee meetings



Representative Entitlement

- Time off with pay during normal working hours for:
 - Performing his functions
 - Undergoing training for those functions



Duty to Consult, Provide Facilities and Assistance

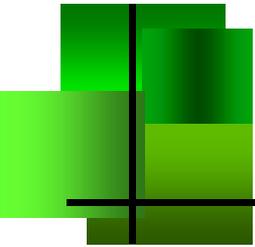


- Employer to consult in good time on:
 - Introduction of H&S measures which may substantially affect those represented
 - Arrangements for appointing or nominating a competent person (Reg. 7 MHSWR)
 - Any H&S information he is required to provide
 - Planning and organising H&S training
 - Introduction of new technology

Inspections of the Workplace

- Entitled to inspect the workplace
- Given notice in writing and have not inspected it in the previous 3 months
- Where there has been a substantial change in the conditions of work or new information has been published by the HSE
- Employer to provide facilities and assistance

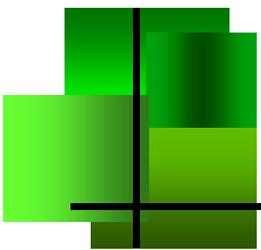




Inspections Following RIDDOR



- Where notifiable accident, dangerous occurrence or disease and
 - It is safe to do so
 - In the interests of employees
- Carry out an inspection in that part of the workplace and
- For the purposes of determining cause inspect any other part of the workplace
- Must inform the employer
- Employer to provide facilities and assistance



Inspection of Documents

- Give the employer reasonable notice
- Shall be relevant to the workplace, except:
 - Against the interests of national security
 - Which contravenes a prohibition placed upon him
 - Personal information unless the individual has agreed
 - Which could cause substantial injury to the employer's undertakings
 - Any information obtained for prosecuting or defending legal proceedings

Successful
Practical
Relevant

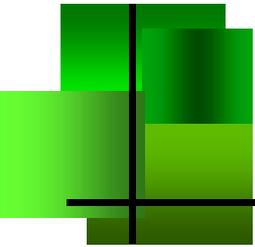


Safety Committees



Safety Committees

- Composition:
 - Matter for the employer, although there must be at least one safety representative on it.
 - A notice stating the composition of must be posted for the information of all staff.
- Functions:
 - To keep under review the measures taken to ensure the health and safety at work of employee
 - Strong advisory role in the management and resolution of an organisation's H&S problems.
- Should meet on a regular basis with an agenda, proper minutes and records of actions taken.



Safety Committees

- Employer to establish where:
 - Requested in writing by at least two safety representatives;
 - Established not later than 3 months after request.
- Employer required to:
 - Consult with the representatives who made the request;
 - Post a notice stating the composition of the committee.

Successful
Practical
Relevant

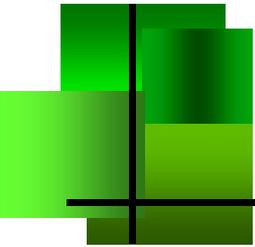


The Health and Safety (Consultation with Employees) Regulations 1996



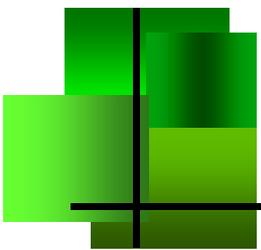
Duty to Consult

- Brought in to cover employees not represented by a safety representative
- The employer shall consult employees in good time on:
 - Introduction of measures which could affect h&s
 - Arrangements for appointing or nominating a competent person
 - Any H&S information he is required to provide
 - Planning and organising of H&S training
 - Consequences of introducing new technology



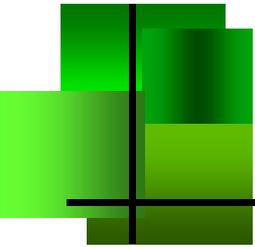
Persons to be Consulted

- Employer to consult with either:
 - The employees directly;
 - One or more persons elected by a group;
 - Representatives of employee safety (ROES).
- Where consulting with ROES employer to:
 - Inform employees of their names;
 - The groups they represent.



Non-disclosure of Information

- The employer does not have to disclose:
 - Against the interests of national security
 - Which would contravene a prohibition placed upon him
 - Personal information unless the individual has agreed
 - Which could cause substantial injury to the employer's undertakings
 - Any information obtained for prosecuting or defending legal proceedings.



Training, Time-Off, Facilities

- Employer to ensure:
 - Each ROES is provided with such training in respect of their functions
 - Employer to meet reasonable costs including travel and subsistence
 - Permit time off with pay as is necessary

Functions of ROES

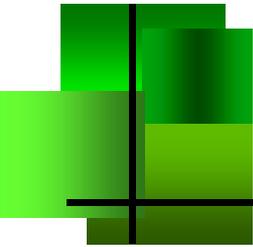
- Make representations on potential hazards and dangerous occurrences
- Make representations on general matters affecting health and safety
- To represent employees in consultations with inspectors

Successful
Practical
Relevant



Promoting a Positive Health and Safety Culture





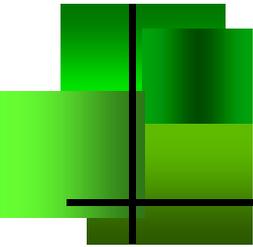
The Culture of an Organisation

- HSG(65) definition:
 - The safety culture of an organisation is the product of individual and group values, attitudes, perceptions, competences and patterns of behaviour that determine the commitment to, and the style and proficiency of, an organisation's health and safety management.
 - Organisation's with a positive safety culture are characterised by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficiency of preventive measures.

Characteristics of an Organisation's H&S Culture



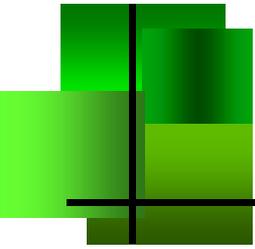
- The main characteristics from which it is possible to develop an understanding of an organisation's health and safety culture are:
 - The extent to which the organisation's health and safety policy is clear, communicated to and accepted by all levels of the organisation.
 - The dominant patterns of behaviour applying to H&S in respect of both what is expected and whether actual behaviour lives up to these expectations.
 - The extent to which employees are actively involved in health and safety decision making.



Characteristics of an Organisation's H&S Culture

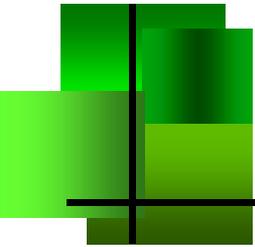
Continued from previous slide:

- The values of the organisation in terms of its responsiveness to health and safety needs, and of the attitudes of its own employees.
- The priority given to health and safety in the organisation, and the drive and commitment shown by management.
- Whether the organisation is proactive in anticipating and planning for health and safety, or reactive in coping with events as and when they occur.



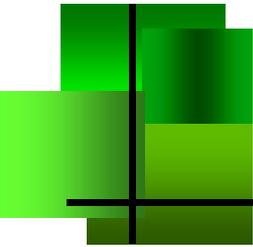
Indicators of a Health and Safety Culture

- Most characteristics which make up the H&S culture are intangible (general feelings).
- However, several are identifiable & measurable.
- They can be divided into 2 classes:
 - **Proactive indicators** – show how successfully health and safety plans are being implemented, mainly through the extent of compliance with systems and procedures.
 - **Reactive indicators** – show the outcomes of breaches of health and safety systems and procedures, mainly through accidents etc.



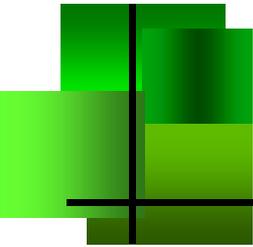
Main Indicators of a Health and Safety Culture

- Accidents
 - Accidents do happen
 - What is important is why they happen
- Absenteeism and Sickness Rates
 - Ill health may take some time to become evident
 - Not always obvious that cause is workplace activities
 - Monitoring a way of gathering information about potential problems
- Staff Turnover
 - Is a general indicator of problems in the workplace.



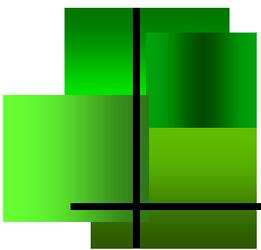
Main Indicators of a Health and Safety Culture

- Level of Compliance with Rules and Procedures:
 - Covers adoption of safe working practices and implementation of required protective measures.
 - The extent to which these rules and procedures are followed.
 - Compliance may not, of itself, indicate a strong health and safety culture, although it is a positive indicator.
 - Monitoring needs to be done with care.
 - Can be achieved by looking at some of the reactive indicators, but is far better assessed by formal and informal checks.
- Complaints About Working Conditions



Factors Promoting a Negative Health and Safety Culture

- Reorganisation
 - During periods of change, accident rates increase.
 - There will be resistance to change; threats to the interests of particular individuals or groups and the uncertainty it creates.
 - The need to maintain operations during the change.
 - Failure of management to allow for adequate consultation can lead to demotivation and even obstruction.
 - Management priorities not being focused on health and safety.



Factors Promoting a Negative Health and Safety Culture - continued

- Uncertainty
 - Lack security and stability in employees employment e.g.
 - Lack of clarity/confusion over what objectives to pursue
 - Management decision making:
 - Rescinding decisions of lower levels of management
 - Lack of consultation
 - Decisions motivated by personal ambitions
 - Do as I say not as I do decisions
 - The outcome of organisational change.
- Poor Selection of Contractors

Introducing Change

- Try not to impose but involve the workforce
- Define broad objectives and then motivate the workforce to take on the principles and carry them forward

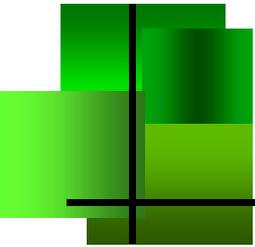
Involved attitude and behavioural changes will prevent accidents

Successful
Practical
Relevant



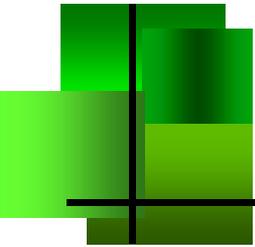
Relationship Between Client & Contractor





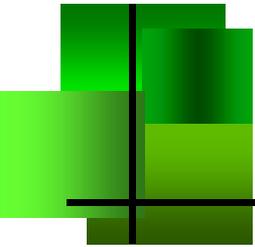
s.3 HASWA (Employer to Contractor)

- Duty of employer
 - To conduct his undertaking in such a way so that people who are not in his employment are not affected thereby
 - To provide to persons who may be affected with information about such aspects which may affect them.



s.4 HASWA (Employer to Contractor)

- General duties of persons concerned with premises to:
 - Persons who are not their employees
 - Use non-domestic premises made available to them as a place of work or where they may use plant or substances
- Duty to ensure premises, access and egress, any plant or substances are safe and without risks to health



Relationship Between Client & Contractor

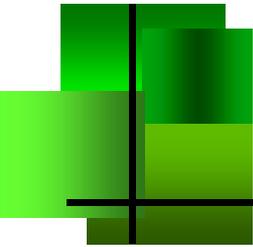
- Contractors are persons engaged to perform a certain task without close supervision and direction from the person paying them (the client). This form of working is common in the construction industry.
- It is probably fair to say that the responsibility for risk control is shared:
 - The **client** being responsible for the workplace and environment, and as the employer to his own workers.
 - The **contractor** being responsible for the job, and as the employer to this own workers.

Construction (Design and Management) Regulations 2015



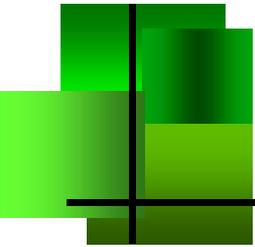
- CDM Regulations will almost invariably apply when businesses engage contractors to build plant, convert or extend premises, demolish buildings and repair/maintenance work.
- CDM requires the contractor to produce a construction phase plan containing:
 - Information regarding the contractor's health and safety policy.
 - The contractor's health and safety organisation detailing the responsibilities of individuals.
 - Information on the contractor's procedures and standards of safe working.
 - Risk Assessments and Method statements for the contract in hand.
 - Auditing and implementation of the plan.





Contractor Selection

- Procedures to ensure that the selected contractor is competent to do the work required safely, should include :
 - Determining what technical and safety competence is required by the contractor e.g. using previous experience of this type of work.
 - Asking the contractor to supply evidence of that competence e.g. reputation with previous or current clients, quality and content of safety policy and risk assessments etc.
 - The supply of contractor information regarding the job and the site, including site rules and emergency procedures.
 - Asking the contractor to provide a safety method statement outlining how they will carry out the job safely.



Shared Responsibilities for Joint Occupation of Premises

- In case of shared occupancy of business premises, the MHSW Regs 1999 require that various employers co-operate with each other and co-ordinate their arrangements for health and safety.
- In particular employers should:
 - Co-operate with the other employers to enable them to comply with the relevant statutory provisions.
 - Take reasonable steps to co-ordinate between other employers to comply with legal requirements.
 - Take reasonable steps to inform other employers where there are risks to health and safety.

Successful
Practical
Relevant



CDM 2015 Duty Holders and their Legal Duties

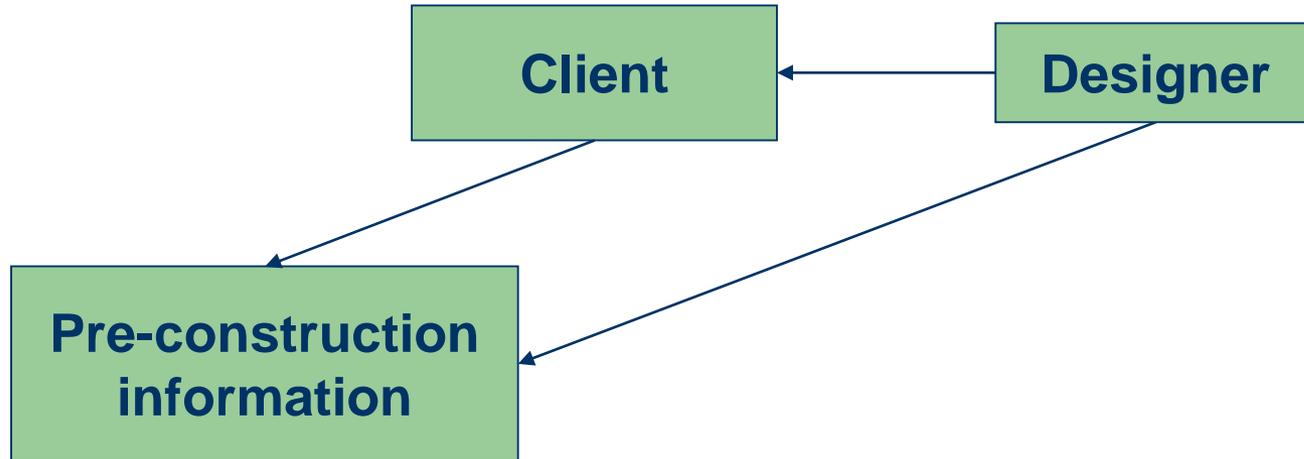


Who are they?

- Client;
- Designer;
- Principal Designer;
- Contractor;
- Principal Contractor;
- and
- Workers.

Organisations or individuals can carry out the role of more than one dutyholder, provided they have the skills, knowledge, experience and (if an organisation) the organisational capability necessary to carry out those roles in a way that secures health and safety.

A schematic of CDM 2015 – Only 1 Contractor



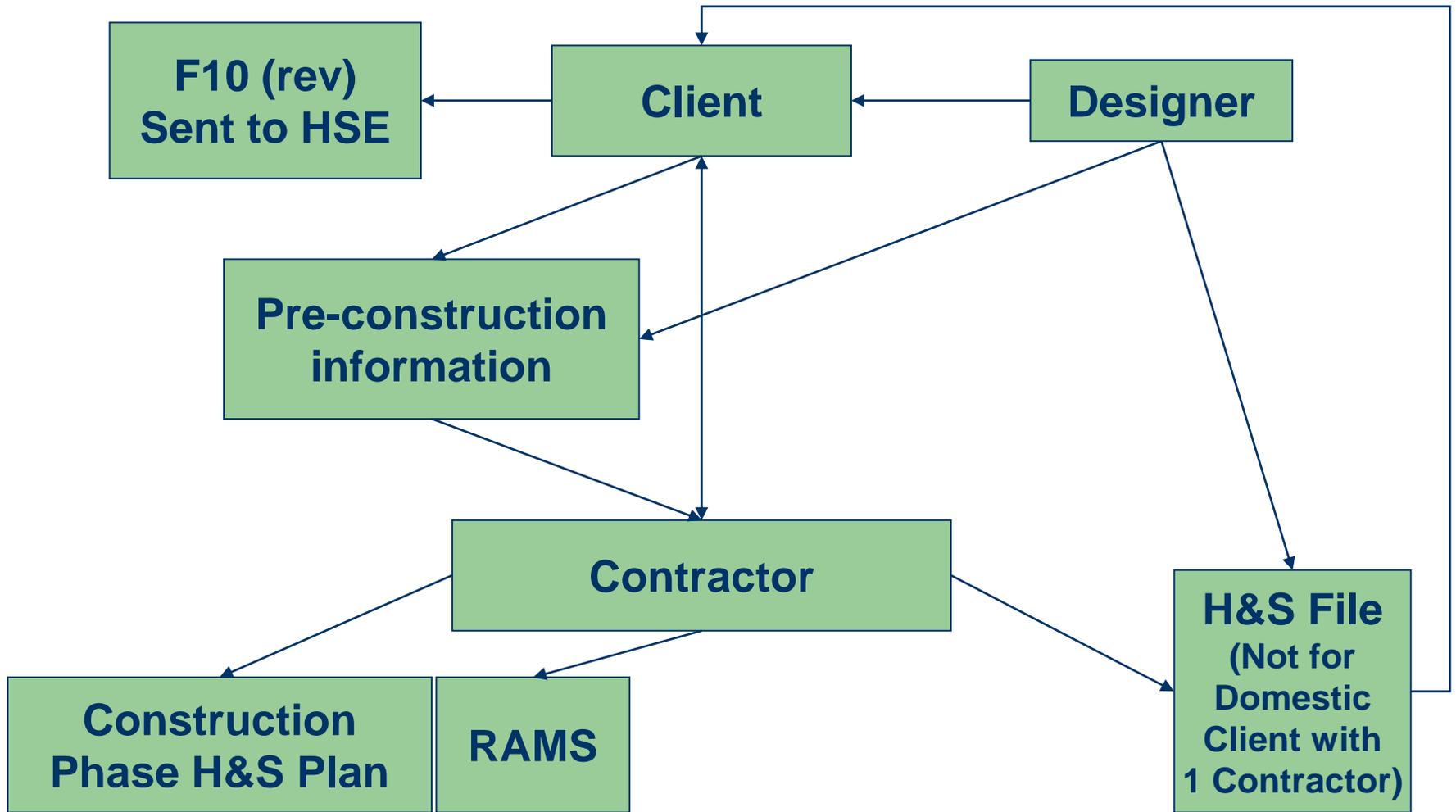
Pre-Construction Information



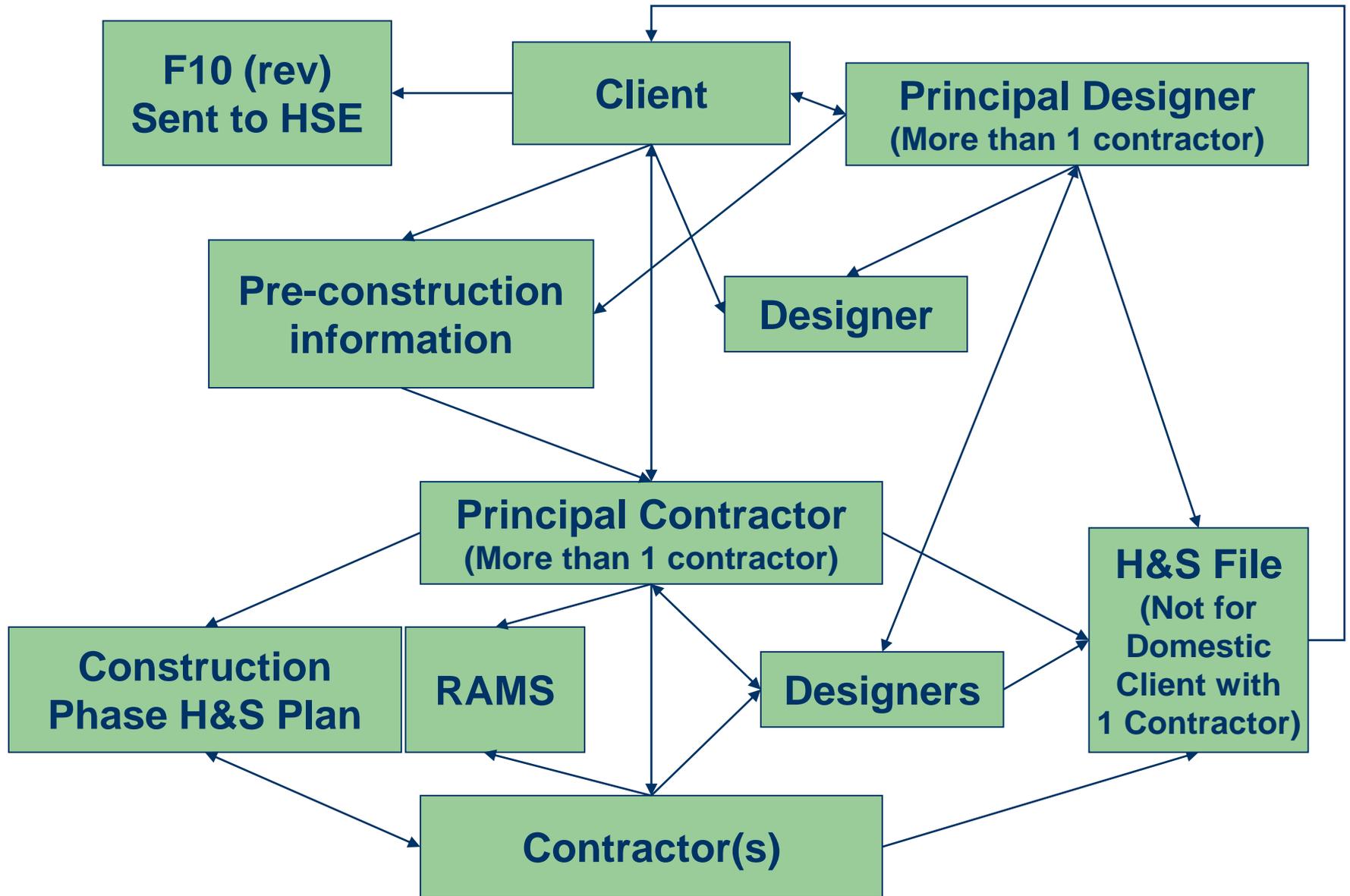
- This is information in the client's possession or which is reasonably obtainable by or on behalf of the client, which is relevant to the construction work and is of an appropriate level of detail and proportionate to the risks involved, including:
 - Information about the project;
 - Information about planning and management of the project;
 - Information about health and safety hazards, including design and construction hazards and how they will be addressed; and
 - Information in any existing health and safety file.



A schematic of CDM 2015 – Only 1 Contractor



A schematic of CDM 2015 – More than 1 Contractor



CDM Regs 2015 – Commercial Clients

- Make arrangements to manage the project without risks to health and safety;
- Ensure welfare arrangements are provided i.a.w. Schedule 2;
- Allow sufficient time and resources for all stages;
- Provide pre-construction information to designers and contractors as soon as possible;
- Ensure, before the construction phase begins, a construction phase plan is drawn up;
- If appointed, ensure the principal designer prepares a health and safety file for the project;
- Take reasonable steps to ensure principal designers and principal contractors comply with their duties;
- Ensure that those they appoint have the necessary skills, knowledge, training, experience and capabilities to carry out their roles.

CDM Regs 2015 – Domestic Clients

- These are the same as for a commercial client however:
 - Where there is only one contractor they will be carried out by the contractor; or
 - Where there is more than one contractor they will be carried out by the principal contractor.
 - Where the client appoints a principal designer in writing they can be carried out by the principal designer.
- Where there is more than one contract a principal contractor and principal designer should be appointed.
- If the domestic client fails to appoint a principal designer then the designer in control of the preconstruction phase becomes the principal designer.
- If the domestic client fails to appoint a principal contractor the contractor in charge of the construction phase becomes the principal contractor.

CDM 2015 – Principal Designers Duties (Slide 1)

- Plan, manage, monitor and coordinate the pre-construction phase;
- Coordinate matters relating to health and safety during the pre-construction phase;
- Estimate the period of time required to complete work stages;
- Take account the general principles of prevention;
- Identify, eliminate or control foreseeable risks to health and safety of any person carrying out construction work, maintaining or cleaning the structure and or using the structure as a workplace;
- Ensure designers comply with their duties;
- Ensure all persons cooperate with the client, principal contractor or contractor;

CDM 2015 – Principal Designers Duties (slide 2)

- Assist the client in the provision of the pre-construction information;
- Provide pre-construction information promptly and in a convenient form to every designer and contractor;
- Liaise with the principal contractor and share information relevant to the planning, management and monitoring of the construction phase and the coordination of health and safety during construction;
- Review, update and complete the health and safety file and pass to the client on completion;
- Hand over the health and safety file to the principal contractor if their appointment finishes before the end of the project.

CDM 2015 –Designers Duties

- Must not start work unless they are satisfied that the client is aware of their duties;
- Eliminate hazards and reduce risks during design;
- Provide information about remaining risks to the principal designer and ensure information is in the health and safety file;
- Take into account the principles of prevention when preparing or modifying a design;
- Eliminate health and safety risks that may affect those carrying out future construction work, maintenance or cleaning a structure or using a structure used as a workplace;
- Take steps to reduce residual risk through the design process;
- Supply information to the client, other designers and contractors so they can comply with their duties;

CDM 2015 – Principal Contractors Duties

- Plan, manage, monitor and coordinate the construction phase plan;
- Estimate the time required to complete the work;
- Take into account the general principles of prevention;
- Organise cooperation between contractors;
- Comply with health and safety legal requirements;
- Ensure the construction phase plan is followed;
- Provide suitable site induction;
- Prevent unauthorised access to the site;
- Provide welfare facilities;
- Liaise with the principal designer;
- Consult and engage with workers; and
- Review/update and complete the health & safety file, if the principal designers appointment ends before project ends.

CDM 2015 –Contractors Duties (slide 1)

- Check client is aware of their duties;
- Plan, manage and monitor construction work;
- For single contractor work estimate the time required to complete the work and take into account the general principles of prevention;
- Comply with the directions given by the principal designer or principal contractor;
- Comply with construction phase plan;
- Consult with workers who are their employees;
- Appoint workers who have, or who are in the process of obtaining the necessary skills, knowledge, training and experience to carry out the tasks that have been allocated;

CDM 2015 –Contractors Duties (slide 2)

- Provide supervision, as required, depending on the hazards, risks, skills, knowledge, training and experience of individuals;
- Provide information and instruction;
- Provide a site induction (if not already provided by the principal contractor);
- Prevent unauthorised access to the site;
- Provide welfare facilities for their own employees who are working on the site and anyone else under their control;
- Contractors appointed by the client are under the control of the principal contractor for the purposes of planning, managing and monitoring construction work.

CDM 2015 – Workers

- They must:

- be consulted about matters which affect their health, safety and welfare;
- take care of their own health and safety and others who may be affected by their actions;
- report anything they see which is likely to endanger either their own or others' health and safety;
- cooperate with their employer, fellow workers, contractors and other dutyholders.

Successful
Practical
Relevant



CDM 2015 Notification of a Project to the HSE



RISK



Project Notification

- A project is notifiable if it is scheduled to:
 - last longer than 30 working days and have more than 20 workers working simultaneously at any point in the project; or
 - exceed 500 person days.
- Where a project is notifiable, the client must give notice in writing to the Executive as soon as is practicable before the construction phase begins.
- The notice must:
 - be clearly displayed in the construction site office in a comprehensible form where it can be read by any worker engaged in the construction work; and
 - if necessary, be periodically updated.

Successful
Practical
Relevant



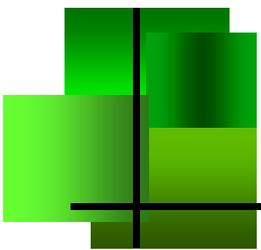
Monitor, Review and Audit

NEBOSH
NGC1 Element 4



Why Measure Performance

- You can't manage what you do not measure.
- Measurement is an accepted part of the 'plan-do-check-act' management process.
- Measuring Health and Safety performance is a management function equal to measuring performance in any other department (finance, production etc.).
- Measuring performance in health and safety is included in the framework of HSG 65 Health and Safety Management System.



Monitoring Health and Safety

- There are 2 approaches to monitoring H&S:
 - **Reactive Monitoring:**
 - Where accidents and other safety-related incidents are investigated to find out what went wrong and identify actions to put it right so that there will be no recurrence.
 - **Active Monitoring:**
 - Where the existing safety measures are inspected to find out if anything may go wrong and identify action to put it right before there is an incident.

Reactive Data

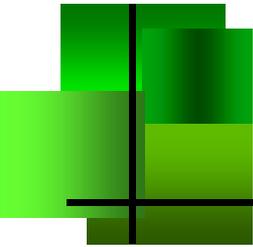
- Unsafe acts
- Unsafe conditions
- Near misses
- Damage only accidents
- Reportable dangerous occurrences
- Lost time accidents
- Reportable major injuries
- Sickness absence
- Complaints made
- Criticisms made by regulatory staff
- Enforcement action
 - Prohibition notices
 - Enforcement notices
 - Prosecutions

Active Data

- Extent of compliance with controls:
 - Inspection results
 - Safety tour results
 - Safety sampling results
 - Audit results
- Health surveillance reports
- PPE equipment use
- Frequency of OSH meetings
- Effectiveness of OSH training
- Reviews of risk assessments
- Number of staff suggestions for OSH
- Communication of safety policy
- Numbers receiving H&S training
- Achievement of OSH objectives

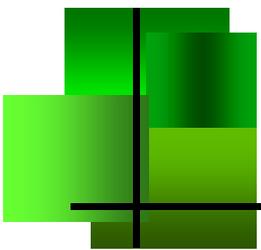
Systematic Inspection

- The measurement process will gather information about performance through:
 - Direct observation of conditions and people's behaviour
 - Talking to people to elicit facts and their experiences, as well as gauging their views and opinions
 - Examining written reports, documents and records.
- There are a variety of means of doing this.



Systematic Monitoring Methods

- Workplace inspections:
 - The systematic examination of the controls in operation, such as: guards; compliance with safe systems of work; effectiveness of information, instruction and training management.
- Safety sampling:
 - The in-depth study of particular aspects of the safety arrangements for adequacy and to identify issues which may be of wider concern.
 - A specific area is chosen to be inspected in about 30 minutes with a checklist used to facilitate the task.



Systematic Monitoring Methods

- Performance review:
 - The systematic collection and review of information drawn from inspections, interviews/consultation and reports, etc. to assess achievement of the organisation's objectives in respect of health and safety.
- Safety audits:
 - The regular comprehensive review of all management systems which support the procedures and measures for ensuring health and safety in the workplace.

Reactive Monitoring

- Purpose – to gather and analyse information about what has gone wrong.
- The information comes essentially from 3 sources:
 - Accidents and other safety-related incidents.
 - The raising of concerns and other H&S issues by employees e.g. complaints and suggestions.
 - From external agencies identifying failings e.g. inspections by enforcement bodies and the issuing of enforcement notices.

Reactive Accident Data

- Can act as a guide to resource allocation and assist in determining the costs of accidents.
- There are limitations on the reliability of accident data:
 - Is historic ~ relates to past and may not predict the future
 - Most ill-health problems are chronic effects ~ reporting of it may be too late to prevent many other occurrences.
 - There is often considerable under-reporting of incidents.
 - It is a matter of chance whether a particular incident results in an injury.
 - Injury statistics often do not reflect the potential severity of an event.
 - People can stay off work for reasons that do not reflect the severity of the event.
 - A low injury rate can lead to complacency.
 - Incident data reflects outcomes not causes.

Workplace Inspections

- Factors governing the frequency and type of inspection:
 - The nature of the risks in the workplace.
 - The methods used to control the risks.

Workplace Inspections Types

- Routine inspections:
 - Those carried out as a matter of routine at all times or at very frequent intervals.
- Maintenance inspections:
 - Involving the examination, testing, repair, adjustments to equipment (e.g. fire appliances)
- One-off inspections:
 - After a breakdown, accident or incident affecting the item.

Workplace Inspections Types

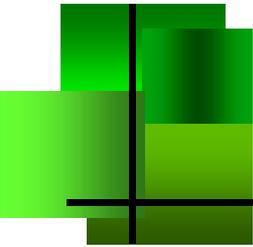
- Safety inspections:
 - Formal inspections of a whole area or section to check on safety measures or particular aspects of them.
- Safety tours:
 - Unplanned inspections by a safety officer, safety representative and/or manager to observe the workplace in operation without any prior warning.
- Safety surveys:
 - Narrower, more in-depth examination of specific issues or procedures following such events as: introduction of new equipment or changes to working practices.

Competence of Inspecting Personnel

- The person responsible for carrying out the inspection must be competent to carry out all the necessary checks.
- The person must be able to draw the correct conclusions from the inspection in terms of deficiencies in any aspect of the workplace safety arrangements.
- The extent of knowledge and skills necessary will vary with the extent of the responsibilities involved in the inspection.
- Safety inspections, tours and surveys will normally involve the safety officer.
- Inspections carried out under specific statutory requirements must usually be led by a person with specific competence in that area of work.

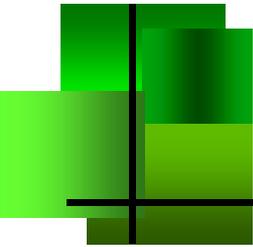
Use of Checklists

- To achieve a consistent and comprehensive approach, it is usual to develop a checklist to cover the key areas.
- A checklist will usually identify all items which need to be inspected in a particular type of inspection.
- The HSE recommends using its own “4 Ps” structure:
 - Premises (e.g. access/egress, housekeeping, environment)
 - Plant and Equipment (e.g. machinery guarding, LEV, use/storage/separation of materials/chemicals)
 - Procedures (being followed, permits-to-work, PPE use)
 - People (e.g. health surveillance, behaviour, authorised persons).



Allocation of Responsibilities for Inspections

- Individual employees
- Supervisors
- Safety officers
- Safety representatives
- Management
- Enforcement authority inspectors



Requirement for Effective Report Writing



The “7 Cs”:

- Clear
- Concise
- Correct
- Courteous
- Complete
- Consistent
- Convincing

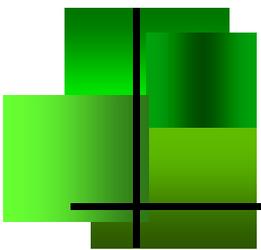
Structure of the Report

The basic maxim that works is:

- Introduction
- Body of the communication
- Summary/conclusion

Can be further expanded to:

- Title page
- Summary
- Contents list
- Introduction
- Main body
- Conclusions
- Recommendations
- Appendices



Emphasis and Persuasiveness

Emphasis:

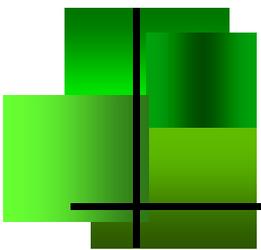
- Concentrate on the facts/ evidence of special significance and not on opinions or supposition.

Persuasiveness:

- A persuasive argument is necessary to influence the reader and convince them of possible results of inaction by a reasoned argument.

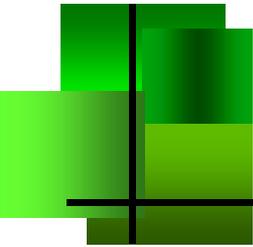
Performance Review - Aim

- To ensure that the safety management system:
 - Is being operated as designed e.g.
 - Inspections are taking place
 - Reports are being reviewed
 - Action is being taken by those responsible.
 - The safety management system is responding to changing circumstances.



Performance Review – KPI's

- Key performance indicators (KPI's) that measure achievement and success are those that ensure the:
 - Degree of compliance with H&S system requirements.
 - Identification of omissions from or inadequacies in the safety management system.
 - Achievement of specific goals.
 - Analysis of statistics on ill health, accidents and near misses to identify immediate and root causes, trends and common features.



Frequency of Performance Review



- The following factors will determine the frequency:
 - Suitable intervals to ensure specific milestones are achieved.
 - The potential for change in conditions over time.
 - The relative importance of the activity/precaution to the overall control of risk.
 - Where inspection and maintenance intervals are prescribed by suppliers to ensure optimum performance.
 - Where intervals are prescribed by legislation.
 - Where there is evidence of non-compliance.
 - Where there is evidence of compliance

Health and Safety Auditing

Scope and Purpose



- Safety auditing is:
 - The structured process of collecting independent information on the efficiency, effectiveness and reliability of the total H&S management system and drawing up plans for corrective action.
- It ensures that:
 - Appropriate management arrangements are in place.
 - Adequate risk control systems exist, are implemented, and are consistent with the hazard profile of the organisation.
 - Appropriate workplace precautions are in place.



Health and Safety Auditing

Key Elements



- Audits are designed to assess the following elements:
 - **Policy:**
 - Its intent, scope, adequacy and whether or not it sets realistic safety targets.
 - **Organisation:**
 - The acceptance of health and safety responsibilities
 - Adequacy of arrangements to consult and empower employees
 - The effectiveness of communication on Health and Safety issues
 - The arrangements for ensuring the competence of staff.

Health and Safety Auditing

Key Elements



- Key elements of auditing continued:
 - **Planning:**
 - The overall control and direction of the H&S effort.
 - The adequacy of risk control measures and risk assessment procedures.
 - **Measurement:**
 - Its adequacy, relevance and design.
 - **Review:**
 - The ability of the organisation to learn from experience, to improve performance, develop the H&S management system and respond to change.

Health and Safety Auditing Performance Standards



- Auditing will look at a wide range of Performance Standards, such as:
 - Health and Safety Policy
 - Management organisation, including the safety committee
 - The training and instruction of workers
 - Supervision
 - Hazard control
 - Legislative compliance
 - The investigation of accidents and other incidents
 - Hazardous materials and health monitoring
 - Regular inspections
 - First-aid services and emergency response, including fire precautions
 - Review processes.

Health and Safety Auditing 'Compliance Rating'



- During the audit, actual performance in relation to each standard will be rated as a percentage of full compliance to give a 'compliance rating'.
- The following indicates what different ratings might mean:
 - 85 to 100% functioning effectively
 - 65 to 84% documented and implemented
 - 50 to 64% meets minimum requirements
 - 0 to 49% requires immediate attention

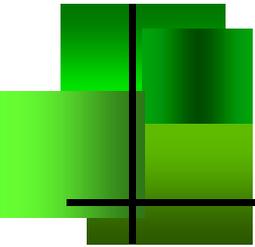
Health and Safety Auditing

Pre-Audit Preparations



- Information gathering from a wide range of documentation:
 - The company safety policy
 - Safety handbooks and manuals
 - Written work procedures
 - Safety committee minutes
 - Accident statistics and investigation reports
 - Planned inspection reports
 - First-aid record books
 - Training records
 - Hazardous substance records





Health and Safety Auditing On Site



- Interviewing
- Review and assessment of additional documents
- Observation of physical conditions and work activities

Health and Safety Auditing

Making Judgments



- The assessment process must be carried out by comparison of what is found against a relevant standard or benchmark.
- A judgment will be made based on:
 - The evidence collected;
 - The degree of compliance of the system being audited; anda score appended against the requirement relative to the standard.

Health and Safety Auditing Internal v External

- External:
 - Advantages:
 - They are independent
 - Likely to have greater experience and expertise
 - Will likely have knowledge or experience of other organisations
 - Likely to be flexible in the arrangements made for the conduct of the audit.

Health and Safety Auditing Internal v External



- External:
 - Disadvantages:
 - Will not be familiar with the particular nature of the work activities.
 - Audit scheme provided may not be tailored to company needs.
 - Will be more expensive than ‘in-house’ auditing.
 - The potential to lose control of the process.
 - Potential for a lack of continuity over time.

Health and Safety Auditing Internal v External



- Internal ('in-house'):
 - Advantages:
 - Familiar with the particular nature of the work activities.
 - The audit scheme will be tailored to the organisations needs.
 - Will be cheaper than an external consultant.
 - Control of the audit process will be retained 'in-house'.
 - There will be continuity of the process.

Health and Safety Auditing Internal v External



- Internal ('in-house'):
 - Disadvantages:
 - There is the potential for subjective judgements and bias to colour both:
 - the information-gathering process; and
 - assessment.
 - The relative lack of broader expertise may be a handicap in recognising the scope for improvement.

Successful
Practical
Relevant



Incident Investigation Reporting and Recording

NEBOSH
NGC1 Element 5

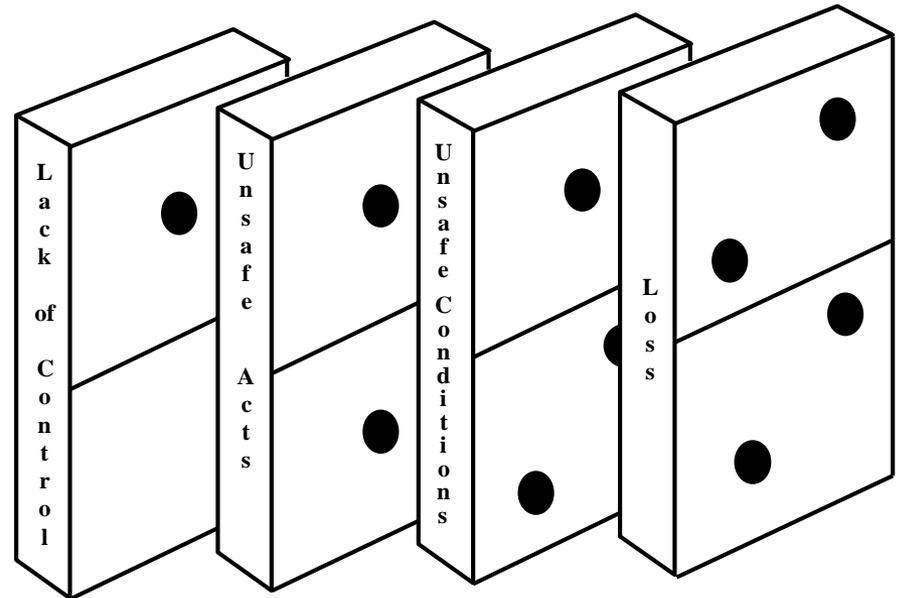


Accident Theory

- Hienrich's Theory 1950
 - One Major
 - Thirty Minor
 - Three hundred Near misses (no Injury)
- HSE Study 1993
 - One serious
 - Ten Minor injuries
 - Thirty Damage accidents
 - Six Hundred accidents with no injury or damage

Domino Theory

- Lack of control
- Unsafe acts
- Unsafe conditions
- Loss



Causes of Accidents

- Lack of forward planning
- Poor control and supervision
- Lack of attention to high risk operations
- Breaches of safety regulations

Accident Rates

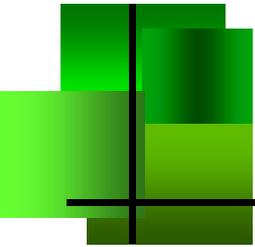
- Two accident rates commonly used:
 - Incidence rate:
 - number of employees
 - Frequency rate:
 - number of hours
- Could also calculate:
 - Mean duration/severity rate:
 - days lost per incident

Successful
Practical
Relevant



Role and Function of Incident Investigation



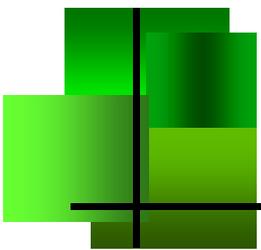


Accident Investigation

- Purpose:
 - To prevent a recurrence
- Knowledge required:
 - Investigation procedure
 - Understanding of human factors
- Skills required:
 - Observation and recording
 - Interviewing

Reasons to Investigate?

- Accidents and incidents may cause harm to people and/or loss
- All incidents should be investigated as any one of them could result in loss
- Purpose is primarily to find the cause and prevent recurrence rather than to apportion blame.
- Prevention is achieved by addressing the the immediate and underlying causes.

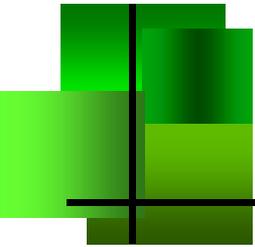


Other Reasons to Investigate

- Other reasons for investigating an accident:
 - To ensure compliance with regulations
 - To take disciplinary action
 - To determine the costs incurred
 - To prepare defence for litigation
 - To demonstrate management's commitment to safety thereby improving workforce morale.

Reasons to Investigate

- Outside agencies reasons for investigation:
 - Enforcement Agencies:
 - To look for evidence of an offence and to identify those responsible (i.e. to blame)
 - Insurance Claim Assessors:
 - To look for evidence of liability



Basic Investigation Procedures

- Establishing the facts.
- Identifying immediate causes
- Identifying any underlying causes
 - i.e. why did the immediate causes occur?
- Identifying remedial action to prevent the causes from occurring again

Who Investigates?

- There are number of people who fill this role, depending on the nature and severity of the incident:
 - The immediate supervisor or foreman.
 - A member of management.
 - A safety representative and/or an employees' representative.
 - A safety officer or one of his staff.

Main Stages of the Investigation Procedure

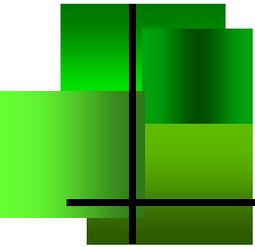
- Site visit - record details
- On site and off site interviews
- Draft report; include:
 - Plans & diagrams
 - Relevant records
 - Photographs
- Identify remedial action
- Feedback and implement

Interviews

- Aim to accurately identify root causes:
 - e.g. removing a guard from a machine
- May need to interview others:
 - supervisor
 - workmates
- Must be objective
- May need other information:
 - equipment maintenance
 - substances register
 - training records

Three Types of Witnesses

- Primary witnesses:
 - Those who are involved directly in the incident, including the victim(s)
- Secondary witnesses:
 - Those who saw the incident
- Tertiary witnesses:
 - Those who did not see the incident but can verify certain information about the actions of people or about aspects of the circumstances



Establishing Interview Rapport

- No guarantee, but try to ensure:
 - One interviewee at a time
 - One interviewer at a time
 - Good introductions
 - Know interviewee's name and role
 - Establish common ground
 - Get interviewee on home ground

Maintaining Rapport

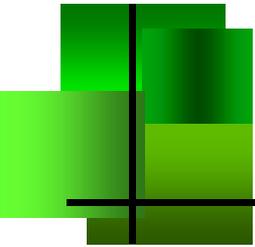
- The following will help maintain rapport
 - No interruptions by you
 - No other interruptions
 - Use open questions
 - Avoid multiple or complex questions
 - Avoid judgements

Recording Interviews

- Reasons for recording interviews:
 - So you do not forget
 - No confusion between interviews
 - Avoid interruptions
- Ground rules for note taking:
 - Wait for rapport
 - Get agreement
 - Record everything

Closing Interviews

- Sequence for closing interviews:
 - Review notes
 - Ask about prevention
 - Possible future interview
 - Thanks

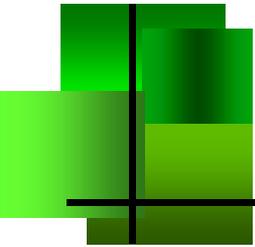


Other Materials to Consider

- Plans and Diagrams:
 - Can be used to append notes to
- Photographs:
 - Visual record of the incident; saves difficulties in describing the scene later on
- Relevant Records:
 - Risk Assessments & Safe Systems of Work;
 - Training and inspection records;
 - Maintenance records; etc.

Plans and Diagrams

- Other things that may be needed to be noted are:
 - Temperature
 - Ventilation
 - Humidity
 - Noise levels
 - Light levels
 - Substances involved
 - Electrical current/voltage flow levels
 - Speed of vehicles or the moving parts of machines
 - Distances involved e.g. reach distances, size of openings etc.



Identifying Root or Underlying Causes

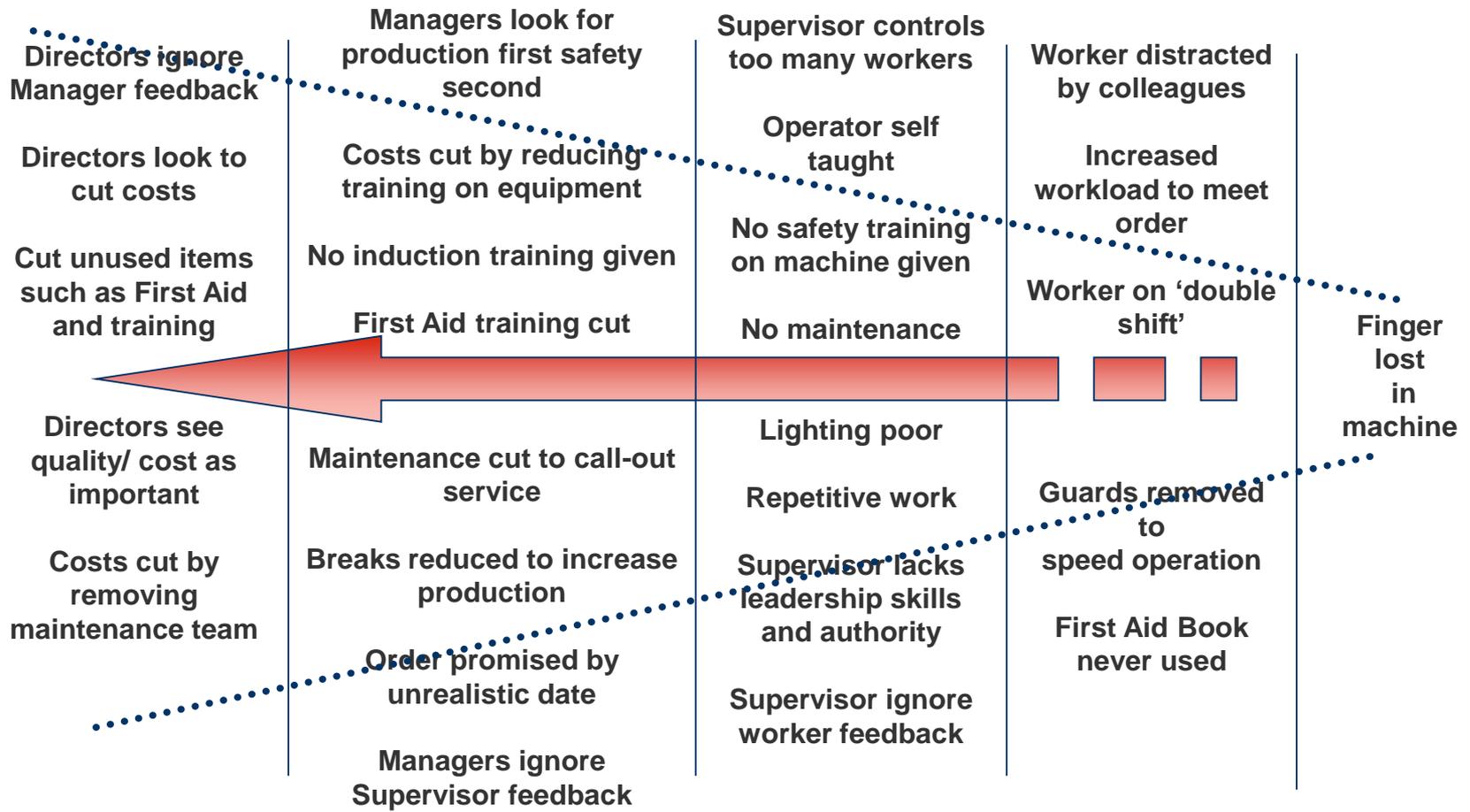
- Asks why the immediate causes occurred
 - what brought about the unsafe acts/omissions or the unsafe condition
- Not enough simply to establish the immediate cause
 - need to know the reason for the immediate cause
 - Tracking back through the underlying causes you will find are more unsafe acts or conditions
 - All these need addressing, but at the heart of all investigation is a failure of management control

Identifying Root or Underlying Causes Management Systems Failures



- In most circumstances, it is possible to identify a management failure which needs to be addressed
- With immediate causes e.g. a broken guard, the following root causes may have been established:
 - The failure to inspect because supervisor absent and no-one else carrying out the inspection; failure in management organisation
 - The lack of understanding of the importance of inspection; failure in supervisory training.
 - The failure to install the guard properly, incorrect or confusing instructions; a fault of the supplier.

Who's Fault? - Lack of Control



Identifying Remedial Actions

- Once the immediate and underlying causes have been identified, we need to determine what needs to be done to prevent the incident, or others with the same underlying causes, happening again.
- Underlying root causes usually require management action at different levels, such as:
 - Changing work practices
 - Improving safety or skills training
 - Improving management and supervisory control
 - Building a more positive safety culture