



LEARNER GUIDE

# **Hazards and Risk Control, and Policy Management (Level 2)**

LNS-WSH-2087-1.1

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2.0	24 May 2017	Revise Course Duration to 16 Hours	Vital Connectors 3.0
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## TABLE OF CONTENTS

<b>Course Overview .....</b>	<b>1</b>
<b>Learning Outcome 1: Follow Safe Work Practices and Risk Control Procedures .....</b>	<b>2</b>
Workplace Safety and Health Act .....	2
Personal Hygiene at Workplace.....	4
Personal Protective Equipment .....	6
Workplace Equipment and Safety Devices .....	10
Safety Signs and Instructions .....	13
<b>Learning Outcome 2: Participate in Workplace Safety and Health Management Activities .....</b>	<b>18</b>
WSH (Risk Management) Regulations 2006 .....	18
Workplace Procedures and Practices.....	19
Potential Hazards and Risks associated within the Work Area .....	20
Follow Workplace Risk Control Measures .....	24
Resolving Hazards and Risks Identified.....	26
Workplace Safety and Health Issues, Unsafe Working Conditions and Work Practices ...	27
Report Workplace Safety and Health Issues to Appropriate Personnel.....	29
Information Needed to Handle Workplace Emergencies.....	30
Workplace Safety and Health Training.....	32
<b>Learning Outcome 3: Follow Workplace Emergency Response Procedures ...</b>	<b>34</b>
Workplace Safety and Health Act and its Subsidiary Legislation and other Regulatory Requirements.....	34
React to Emergencies at the Workplace.....	35
Equipment and Materials for Emergency Response .....	37
Activate Emergency Services .....	40
Follow the Instructions in the Event of Emergency .....	41
Participate in Organisational Emergency Response Exercise.....	44
Infectious Disease Outbreak Control .....	45
<b>Appendix A: Learning Activity 1 .....</b>	<b>48</b>
<b>Appendix B: Learning Activity 2 .....</b>	<b>50</b>
<b>Appendix C: Learning Activity 3 .....</b>	<b>52</b>
<b>Appendix D: Learning Activity 4 .....</b>	<b>53</b>

## Course Overview

Code:	LNS-WSH-2087-1.1
Name:	Hazards and Risk Control, and Policy Management (Level 2)
Duration:	16 hours, inclusive of 2 hours of assessment

### WSQ Framework

Landscape

### Technical Skills and Competencies (TSC)

Hazards and Risk Control, and Policy Management

### TSC Proficiency Description

Level 2

LNS-WSH-2087-1.1

Interpret relevant Workplace Safety and Health (WSH) legislations and relevant industry codes to aid in hazards identification at the workplace.

### Learning Outcomes

On successful completion of this unit, the participant will be able to:

1. Follow safe work practices and risk control procedures
2. Participate in workplace safety and health management activities
3. Follow workplace emergency response procedures

### Teaching Methodologies

- Lecture
- Discussion
- Demonstration
- Practical
- Feedback

### Assessment Methodologies

- Role Play (60 minutes)
- Oral Questioning (60 minutes)

## Learning Outcome 1: Follow Safe Work Practices and Risk Control Procedures

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This section looks at the safe work practices and risk control procedures to be followed at the workplace.

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### Workplace Safety and Health Act

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- UK1.1 The worker's responsibility stipulated under the Workplace Safety and Health Act  
UK1.2 The role and responsibility of Workplace Safety and Health Committee stipulated under the Workplace Safety and Health (Safety Committee) Regulations

The Workplace Safety and Health Act came into effect on 1 March 2006, and by September 2011 it covers all workplaces. The WSHA aims to cultivate good safety habits in all individuals to engender a strong safety culture in our workplace and emphasizes the importance of managing workplace safety and health proactively.

Every person is required to take reasonably practicable measures to ensure the safety and health of every workplace and worker. The legislation is based on the three guiding principles.

### 3 Guiding Principles to Prevent Accident

1. Reduce risk at source
2. Greater industry ownership
3. Higher penalty

### Roles and Responsibilities of Employers

- Ensuring that workers comply with WSHA
- Providing safety instruction and job training
- Ensuring that workers have the right equipment and safety gear
- Ensuring workers are not exposed to health and safety hazards
- Following proper procedures in case of injury
- Identifying hazards and obtaining information about them
- Conducting accident investigations and workplace inspections
- Making recommendations to resolve safety and health concerns

### **Duties of Persons at Work**

- You must adhere to safe working procedures and principles introduced at the work place;
- You must not endanger yourself or others working around you through unsafe behaviour;
- You should not tamper with any safety device or undertake any wilful or reckless acts;
- You should also always correctly use any personal protective equipment provided at work.

### **Roles and Responsibilities of Workplace Safety and Health Committee**

- Act as advisory body
- Identify hazards & obtain information about them
- Inspect workplace for any unsafe acts or unsafe conditions
- Inspect any accident or dangerous occurrences that occur at workplace
- Recommend corrective actions & monitor results of implemented solutions
- Promote co-operation between management & employees
- Assist in organizing activities to promote safe conduct of work

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## Personal Hygiene at Workplace

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PC1.1 Practise personal hygiene at workplace  
UK1.3 Personal hygiene  
UK3.6 Importance of practicing good hygiene at the workplace

It is important to practise good personal hygiene in any workplace:

- To get rid of the unwanted germs that tend to accumulate in various parts of human body that causes infection, illness and odours.
- To prevent the spread of infectious disease

The simplest way to prevent illness is to practise discipline related to health like washing hands regularly and keeping the fingernails clean and cut neatly.

### Methods of Washing Hands

- Wet hands under running water and add soap. Spread the soap thoroughly over the hands by rubbing hands together to create bubble.
- Rub around 20 seconds on the hands from palm to palm; Back of both hands; Palm to palm with fingers interlaced; Back of fingers (interlocked); All parts of hands (including thumbs) and finally, both palms with fingertips and fingernails
- Rinse the hands under running water, being sure to hold the hands in a downward position.
- Dry well with a clean towel.

Note: If water and soap are not available, use alcohol-free sanitizer. Or try to use antimicrobial wipes or towelettes.

### When to Wash Your Hands

- After blowing/wiping the nose, coughing, sneezing and touching your hair
- After using the restroom
- Prior to eating meals or snacks
- Whenever hands are soiled
- Before putting on clean gloves
- Before and after contact with chemicals

Source: National Health Promotion Board

### **Keeping Fingernails Clean**

Hands are always the first and main part of the body that becomes dirt in our everyday activities. Overlooking on the fingernails that accumulate dirt shall cause various infections especially ingestion and contact.

To maintain the nails clean,

- Never scrap or scratch anything. Keep the nails short.
- Do not bite your nails. This habit will weaken the nails.
- Soak your nails with warm soapy water for about 2-3 minutes.

### **Wearing Clean Attire**

- It is essential to wear a clean attire to prevent cross contamination of communicable diseases from one person to another.
- Clean clothing acts as a barrier. Hence wear clothes that have maximum coverage over the body.
- Replace clothes on regular basis especially when soiled, torn or frayed.

### **Keep Hair Neat and Tied Back or Covered with Cap**

- Restrain hair by using hairnet. Keep the hair tied or pleated to prevent loose hair.
- Wash hair periodically and keep it clean.

### **Covering Cuts or Sores with Waterproof Plasters**

- Exposed / cut part of the body is easily prone to bacterial accumulation. Ensure that all cuts and grazes are clean and have appropriate dressings.
- Wash the cut areas with clean water and a gentle cloth to clean the wound
- Apply authorized antibiotics or waterproof plaster to cover the wound from exposure to bacteria
- All swabs used to clean injuries shall be disposed correctly.
- If symptoms of yellow liquid persist, see the doctor immediately.

### **Covering Mouth when Coughing or Sneezing**

- To stop infections, use tissue to cover your mouth and nose during coughs and sneezing.
- Dispose the blown nose tissue correctly into a bin
- Wash your hands and mouth with clean water

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## Personal Protective Equipment

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- PC1.2 Use and maintain personal protective equipment required for the work  
PC2.4 Participate in identifying personal protective equipment requirements for the work in accordance with the organisational procedures  
UK1.4 Types of personal protective equipment  
UK2.4 Common types of personal protective equipment and their functions

There are many types of personal protective equipment, such as, safety helmet, goggles, mask, hearing protection, hand gloves, safety belt, safety harness, safety shoes to protect workers from head to toes from injuries.

When using personal protective equipment, a worker should:

- be able to recognize the hazards associated with the work involved
- be familiar with the best safety equipment available to protect against the hazards
- know the procedures for using the equipment - check if the equipment is in a good condition - correct ways of putting on the equipment - choose the correct type of equipment

Maintaining the personal protective equipment, the followings should be observed:

- keep equipment stock rooms neat, clean, and orderly
- keep stocks of various items of equipment
- replace worn-out equipment

The different types of Personal Protective Equipment are:

### Overalls

Overall is a type of garment that is used as protective clothing during work. The overall protect the person against flame, chemicals and radiation.

For landscape industry, it is recommended for workers to wear protective clothing, such as a long sleeve shirt to protect them against minor cuts by tree branches/ shrubs and sharp tools as well as UV rays from sun. Additional protective clothing such as chainsaw chaps will be required for works involving hazardous machinery such as the chainsaw and grass cutter

It is also recommended for workers to wear high visibility vests to increase their visibility to traffic users, especially at the working areas located along the expressway or roadside. Fluorescent lime-yellow or red-orange vest and retro-reflective vest are used for day and time, respectively.

## Head Protection

Head protection equipment such as safety helmet /hard hat shall be worn in condition which give raise to objects fall from height, workers located at high risk environment such as construction sites, or during conductive work such as handling wiring or electricity. The workers who are doing tree pruning activities or horticulture works at heights are required to wear head protection to prevent falling objects hazards.

The head protection equipment shall be inspected periodically for signs of damage like cracks, ductility and expiry date.

## Eye Protection

Eye protection safeguards a person against

- Dust particles like saw dust, metal dust from work activities like grinding, sawing, and chiselling
- Chemical splash / sprays from activities such as spray paints, mixing of enormous amount of chemicals
- Radiations from welding, heat, sparks
- Biological infections

Eye protection equipment is generally goggles; eye glasses, face shield.

For landscape industry, the workers should wear the appropriate eye protection equipment, such as cover goggles, safety spectacles with wide shields or over-the-glass safety spectacle to protect them against high speed flying large particles. There is a potential of exposure to high speed flying particles such as wood dusts, grass, pebbles or foreign objects when carrying out tree pruning or grass cutting. Workers can use the combination of goggles and face shield for optimum protection to their eyes and face against flying particles, chemical splashes and dust. It is to take note that face shields should not be used as the sole means of protection against injury to eyes.

Eye protection shall be maintained properly by cleaning; avoiding any scratches, breaks. Always keep them clean and dry.

## Ear Protection

Ear mufflers, ear plug are common ear protection equipment. They are used to reduce the noise level generated from machinery or from the environment when worn. The audible limit for human ears is 85dB. Hearing protectors should be worn if the noise level exceeds the audible limit. For landscape industry, excessive noise could be generated during the operation of chainsaw, grass cutter or ride-on mower.

The suitable ear protection shall be chosen for its effectiveness. The ear plug shall be checked for any wear and tear; replace when it is out of shape, broken. Clean the ear plugs with warm water for hygienic condition.

## Hand Protection

Gloves are normally hand protection equipment. There are different types of gloves that suit the work nature. For example, rubber gloves used in hospitals; neoprene gloves used to handle chemicals in various industries, cements in construction worksites; general plastic gloves used to handle food.

Gloves provide protection against hot surfaces, allergic reaction by chemicals; biological protection against infections while handling foods, bacteria and wastes. In landscape industry, hand protection is required when handling chemicals such as pesticide, fertilizer, diesel and working with sharp edged hand tools such as cutters.

Gloves have to be examined for holes, cuts. Fill water into the gloves to check for any leaks. Remove any ornaments like rings, bracelet while wearing gloves.

## Foot Protection

Safety shoes, safety boots provides protection to the legs from impact of heavy objects falling from height, sharp tools, hot or wet surfaces, chemical spills, oily or slippery floor.

The shoes shall be washed and kept clean. Do not wear other people's shoes for hygienic reasons. Check the shoes regularly for damages. Ensure the shoes are comfortable to wear. Example, correct fit, enough space for front of leg.

## Fall Protection

Fall protection equipment provides protection from person falling from height. There are different types of fall protection systems. Example, safety belt and safety harness are personal fall protection equipment. Safety /Travel restraint system restricts the movement of people to a certain distance in respect to the length of the lanyard.

In landscape industry, work activities such as horticulture pruning at overhead bridges and tree pruning, require the use of fall protection PPE. For roof top activity, fall restraint roof-edge restraint systems will provide limit access where workers could work. These systems will prevent the workers from falling over the edge of the building by limiting or restraining the worker's movement.

All fall protection system shall be checked daily before usage. Ensure the buckles, stitching, lanyards are in good condition.

## Respirators

Respirators protect the person from breathing in toxic, poisonous gases or vapours. There are different types of respirators. Example, Air purifying, Air supplied respirators. Respirators should be cleaned and inspected by authorized persons. Face pieces should be cleaned in warm water and disinfected with dilute bleach solution.

When wearing the respirator, ensure it fits correctly onto the face such that there is no gap around the nose and chin area. The bands should be wound over the ears. The respirator should be replaced when it is soiled or damaged.

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## Workplace Equipment and Safety Devices

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- PC1.3 Use and maintain workplace equipment and safety devices  
PC2.5 Participate in identifying safety device required for safe operations of machinery and equipment if any at the workplace  
UK1.7 Types of safety devices  
UK2.5 Common types of machinery and equipment safety devices and their functions

Safety devices are designed to protect operators from injury. Maintenance is important to ensure all equipment and machinery are functional. Frequent inspection and replacement are to be carried out to ensure the effectiveness of these safety devices.

Example:

- Check that safety devices such as fire extinguishers are valid (e.g. within expiry date, pressure meter shows that the pressure is within the green zone).
- Check that equipment's safety features (e.g. safety covers, interlocks, and emergency stop buttons) are working properly.

The types of safety devices are:

### Fixed Guards

Fixed guards are provided on the machine to prevent access into dangerous parts of machine. These parts shall be securely fenced. Safeguards shall not be removed whilst machine is in motion. For maintenance of machine, example lubrication and adjustment, shall be done by trained person only.

### Safety Barriers or Railing

Safety barrier is provided to prevent person from accessing to dangerous zone or hazardous area as well to prevent access to moving parts of the machine.

#### a. Plastic Mesh Fence

The plastic mesh is used mainly to prevent the unauthorised pedestrians from entering the work area. It shall be kept at least 500mm from the edge of excavation. Plastic mesh fence shall not be used near deep excavations or steep falls where pedestrian movement is expected.

#### b. Plastic Barricades

Barricades are portable devices used to control pedestrian movement to prevent injury or interference with the work activity. These barricades shall not be used next to deep excavations or steep falls where pedestrian movement is expected.

### c. Traffic cone

Traffic cone is used for short duration delineation and channelling of traffic. The traffic cone shall be placed at least 300 mm away from the edge of the traffic lane. It will guide and direct the approaching vehicles smoothly and gradually to pass the work zone safely. Only the traffic cones approved by LTA can be used on site.

### d. Roof top railing

The installation of roof top railing will prevent the workers from falling during installation, inspection, and maintenance activities at roof top.

## Safety Covers

The safety covers provided on the machine is to prevent from traversing or moving parts of the machine hitting the person. Example, belt or conveyors, motors, scabbard for chainsaw. Safety cover can also protect a person from contact with hot surfaces.

## Safety Signage

Safety signage is an important means of communication to state the type of hazard, procedures to follow and emergency information. There are different types of signage.

Examples include Dangers signs, Caution signs, Emergency signs, Warning signs.

- Caution signs are generally yellow in colour
- Warning signs are in red
- Safety information signage is blue (e.g. PPE's)

Safety signs are fixed on the walls; onto the tanks, containers holding hazardous items; mounted on stands.

### a. Truck Mounted Attenuators

Truck mounted attenuator (TMA) is used when working on expressways and road with speed limit of above 70km/h. The TMA attached to the protective vehicle will provide warning signal to road users or motorist to ensure a safe road environment.

### b. Blinking Beacon Lights

Blinking beacon lights can be mounted on the top and rear of vehicles to warn road users, workers or motorists. It will enhance the visibility of the temporary traffic control devices and work hazards within the work zone.

## **Emergency Button**

Emergency buttons are provided on machine to switch off power during emergency situations. It shall be within reachable distance to person operating the machine or in the electrical panel. The emergency button has to be tested once in a month.

## **Lock Out Tag Out Devices**

Lock out and tag out devices are used to protect against unexpected energizing equipment, to start-up or release of energy.

Inspection, cleaning, repair or maintenance of any plant, machinery or equipment, as well as electrical installation that, if inadvertently activated or energized, is liable to cause bodily injury to any person. Ensure all energy sources to the relevant plant, machinery or equipment are isolated, disconnected or discharged before maintenance.

Examples: circuit breaker lockouts, electrical lock out, padlocks.

## **Interlocks**

Interlocks are provided to prevent machine damage by tripping itself or to the person when the machine is set to stop. Examples include electronic sensors and mechanical stoppers.

## **Residual Current Circuit Breakers**

A residual-current device (RCD) is an electrical wiring device that disconnects a circuit whenever it detects that the electric current is not balanced between the energized conductor and the return neutral conductor. These are previously known as earth leakage circuit breaker.

## **Circuit Protective Devices**

Circuit protective devices are used to protect wires from being damaged by excessive current due to over current or short circuit. Fuses, relays and MCCB are few examples of circuit protective devices.

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## Safety Signs and Instructions

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- PC1.4. Follow safety signs and instructions in workplace
- UK1.5 Importance of safety signs and their purposes
- UK1.6 Types of safety signs

Safety signs provide information in a pictorial form so that any worker may identify them easily without fully understanding the language.

### Purpose and Importance of Safety Signs

Safety signs warn workers of the likely hazards or precautionary measures to observe. Hence, it is important for workers to know the safety signs commonly located at their workplace.

The types of Safety Signs include:

### Regulatory - Prohibition (Colour: Red)

A prohibition sign shall be circular in shape and has a red circular band and a red cross bar.



### Regulatory – Mandatory (Colour: Blue)

A mandatory sign shall be circular in shape, has blue as its background colour and white for the text and symbol



Source: Health and Safety Executive

### Hazardous / Warning (Colour: Yellow)

A warning sign shall be triangular in shape with a black triangle band as its perimeter, yellow as its background colour with a black symbol or text or both.

 Slippery Surface	 Electric	 Hazard
 Biological Material	 Falling Objects	 Ionising Radiation

Source: Health and Safety Executive

### Globally Harmonised System (GHS)

A system for chemical classification and hazard communication

 Flammable Substances	 Corrosives	 Respiratory Sensitizer
 Environmental Toxicity	 Acute Toxicity	 Oxidising Substance

## Information - Fire Safety / Emergency Signs



Source: Health and Safety Executive

## Temporary Traffic Warning Signs

Warning signs are used to bring the attention to potential hazardous conditions on or adjacent to a road. Temporary traffic warning signs normally are placed in advance of the site to warn road users of the obstructions or conditions caused by the works ahead.

Signs	Instructions
	<p>Warn road users of the work zone ahead. Convey the warning that road users should be more cautious. Usually the 1<sup>st</sup> warning sign to be seen.</p>
	<p>Warn road users of the works ahead by the relevant department. Usually the 2<sup>nd</sup> warning sign to be seen.</p>
	<p>Warn road users of the road narrowing on the left ahead. Usually placed after the “Works Ahead” sign and before the road width is reduced. Use when only part of the left lane is closed.</p>
	<p>Warn road users of road shoulder being close ahead. Usually placed after the “Works Ahead” sign and before the shoulder is closed.</p>

Source: Land Transport Authority

## Learning Outcome 2: Participate in Workplace Safety and Health Management Activities

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This chapter looks at how a worker can participate in workplace safety and health management activities.

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### **WSH (Risk Management) Regulations 2006**

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UK2.1 Workplace Safety and Health Act & its subsidiary legislation

Every employer, self-employed, or principal shall:

- Conduct a risk assessment for the workplace.
- Take reasonably practicable measures to eliminate or reduce safety and health risks.
- Establish safe work procedures if the risks cannot be eliminated.
- Specify the roles and responsibilities of persons involved in the implementation of risk control measures and safe work procedures.
- Inform employees of the nature of the risks involved and any risk control measures, or safe work procedures implemented.
- Keep records of risk assessment.
- Review or revise risk assessment at least once every 3 years. It must be reviewed in the event of the following:
  - After an accident as a result of exposure to a hazard,
  - When there is a significant change in work processes that could affect the safety and health of the workers, for example, the introduction of new machinery or chemicals.

Failure to conduct risk assessment and implement measures to eliminate or control the risk:

- First offence, a fine of not exceeding \$10 000
- Second or subsequent offence, a fine of not exceeding \$20 000 or imprisonment not exceeding 12 months or both

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## Workplace Procedures and Practices

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UK2.3 Workplace procedures for contributing and participating in WSH

### Workplace Procedures and Practices

#### Job Procedure and Work Instructions

Information and instructions are commonly incorporated in employee handbooks which are issued to employees at the induction training stage. These in-house rules and regulations are straight forward which includes:

- Rules on safe working
- Procedures for reporting incidents and hazards that may arise in the workplace
- Instructions on the correct use of personal protective equipment
- Information on their role of the health and safety as well as Safety and Health representative.

#### Specific Workplace Safety and Health Information

- Specific hazards - Falling from height; expose to radioactive materials; suffocation in a confined space, expose to flammable / corrosive chemicals
- Safety signs and symbol - No naked flame; wear PPE; Fire escape route; highly flammable; dangerous material; radiation (refer to PC 1.4 for details)
- Emergency response - Fire outbreak; explosion; chemical spillage; accident / incident; infectious disease outbreak
- Hazard identification, risk assessment and controls - the risk assessment shall be carried out before commencement of any activities.
- Use of personal protective equipment (PPE) - The use and maintenance of PPE

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## Potential Hazards and Risks associated within the Work Area

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- PC2.1 Identify and report potential hazards and risks associated within the work area in accordance with the organisational procedures
- UK1.8 Risk associated with assigned tasks
- UK2.6 Definition of hazards and types of hazards
- UK2.7 Definition of risk

### Definition of Hazards

Hazard means anything with the potential to cause bodily injury, death or damage to property. This includes any physical, chemical, biological, mechanical, electrical or ergonomic hazard.

### Definition of Risk

Risk means the likelihood that a hazard will cause a specific bodily injury to any person.

### Common Workplace Hazards

There are different types of hazards in the workplace. These are categorized into the following:

Categories	Examples
Physical	<ul style="list-style-type: none"><li>• Working at height</li><li>• Slips and trips hazards</li><li>• Falling objects</li><li>• Prolonged exposure to extreme of temperature</li><li>• Exposure to excessive level of noise</li><li>• Accidentally contact with sharp objects</li></ul>
Chemical	<ul style="list-style-type: none"><li>• Accidentally contact with / exposure to corrosive, flammable, carcinogenic chemicals</li><li>• Improper storage and handling of chemicals</li></ul>
Radiation hazard	<ul style="list-style-type: none"><li>• Expose to radiation like alpha particles, beta particles, gamma rays, X-rays, neutrons</li></ul>
Ergonomics	<ul style="list-style-type: none"><li>• Awkward / static posture</li><li>• Repetitive work</li><li>• Over-stretching</li></ul>
Mechanical	<ul style="list-style-type: none"><li>• Contact with sharp point</li><li>• Contact with pinch point</li></ul>

Categories	Examples
	<ul style="list-style-type: none"> <li>• Equipment operated by non-competent persons</li> <li>• Faulty machinery and equipment safety devices, e.g. absence of safety guard</li> <li>• Poor maintenance of machinery and equipment</li> </ul>
Manual handling	<ul style="list-style-type: none"> <li>• Improper posture when pushing, pulling, lifting heavy objects</li> </ul>
Biological Infectious disease outbreak	<ul style="list-style-type: none"> <li>• Bitten by animals; stung by insects; contact with poisonous plants</li> <li>• Exposure to bacteria; fungi</li> <li>• Outbreak of contagious disease: Avian flu, seasonal flu</li> </ul>
Electrical	<ul style="list-style-type: none"> <li>• Overloaded plug</li> <li>• Exposed wire</li> <li>• Un-insulated wires</li> <li>• Use of faulty equipment</li> <li>• Electrical installation without tripping devices</li> </ul>
Fire and explosion	<ul style="list-style-type: none"> <li>• Incompatibility of activities, e.g. presence of naked flame in vicinity with the storage of flammable materials</li> <li>• Incompatibility of storage of chemicals</li> <li>• Obstruction to the ventilation of heaters, machinery or office equipment</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Confined space</li> <li>• Lack of ventilation</li> <li>• Poor housekeeping, e.g. untidy workstation</li> </ul>

## Risk Assessment

Risk Assessment (RA) is the process of identifying safety and health hazards associated with work, assessing the level of risks involved, and prioritizing measures to control the hazards and reduce the risks.

To cultivate safe work practice for the workplace activities, we should:

- Identify hazards associated with such workplace activities
- Evaluate their risk levels through SEVERITY of hazards and LIKELIHOOD of occurrence
- Implement WSH control measures to eliminate or minimum the risk

Risk assessment is useful in identifying the hazards at workplaces and implementing effective risk control measures before they escalate into accidents and injuries.

Table 1: Severity

Severity	Description
Catastrophic (5)	Fatality, fatal diseases or multiple major injuries
Major (4)	Serious injuries or life-threatening occupational diseases (includes amputations, major fractures, multiple injuries, occupational cancer, acute poisoning, deafness)
Moderate (3)	Injury requiring medical treatment or ill-health leading to disability (includes lacerations, burns, sprains, minor fractures, dermatitis, work-related upper limb disorders)
Minor (2)	No injury, injury or ill-health requiring first aid only (includes minor cuts and bruises, irritation, ill-health with temporary discomfort)
Negligible (1)	Not likely to cause injury or ill-health

Table 2: Likelihood

Likelihood	Description
Rare (1)	Not expected to occur but still possible
Remote (2)	Not likely to occur under normal condition
Occasional (3)	Possible or known to occur
Frequent (4)	Common occurrence
Almost certain (5)	Continual or repeating experience

Table 3: Risk Matrix (RPN)

Likelihood \ Severity	Rare (1)	Remote (2)	Occasional (3)	Frequent (4)	Almost Certain (5)
Catastrophic (5)	Medium (5)	Medium (10)	High (15)	High (20)	High (25)
Major (4)	Medium (4)	Medium (8)	Medium (12)	High (16)	High (20)
Moderate (3)	Low (3)	Medium (6)	Medium (9)	Medium (12)	High (15)
Minor (2)	Low (2)	Medium (4)	Medium (6)	Medium (8)	Medium (10)
Negligible (1)	Low (1)	Low (2)	Low (3)	Medium (4)	Medium (5)

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## Follow Workplace Risk Control Measures

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PC1.5 Follow workplace risk control measures

UK1.9 Workplace risk control measures

### Workplace Risk Control Measures

Based on the risk level determined, risk controls will have to be selected to reduce the risk level to an acceptable level. Using the risk matrix, High Risk levels have to be brought down to at least “Medium Risk” through additional risk controls. This shall be done according to the hierarchy of controls.

#### Hierarchy of controls

##### Elimination

Elimination is the most preferred option in controlling hazards and preventing injury and ill-health in a workplace.

##### Substitution

Replace a hazard with one that has a lower risk potential.

##### Engineering Control

Physical means introduced to limit a hazard, such as, isolation, structural changes, noise absorber.

##### Administrative Control

Reducing hazard by adherence to procedures, instructions and safe work practices

##### Personal Protective Equipment

Using personal protective equipment is the last consideration of risk control measures. Usually, it is used as an additional means of personal protection against hazards and risk to safety and health.

Examples of risks associated with assigned tasks and recommended risk controls:

<b>Tasks</b>	<b>Hazards</b>	<b>Risk</b>	<b>Risk Control Measures</b>
Welding activity performed near the storage of flammable materials	Potential fire due to incompatibility of activity	High	<ul style="list-style-type: none"> <li>Relocate the location of welding activity (Elimination)</li> </ul>
Use of hazardous chemicals	Potential health concern	High	<ul style="list-style-type: none"> <li>Replace with less hazardous chemicals (Substitution)</li> <li>Proper storage, handling of chemicals (Administrative control)</li> <li>Use of suitable personal protective equipment (PPE)</li> </ul>
Carry of heavy items	Potential backache due to improper posture or repetitive movement	Medium	<ul style="list-style-type: none"> <li>Use of trolley (Engineering control)</li> <li>Buddy system (Administrative control)</li> </ul>
Using ladder to access high area	Potential falling from the ladder due to broken rung	Medium	<ul style="list-style-type: none"> <li>Use of mobile elevated work platform (Engineering control)</li> <li>Check the conditions of ladder before using (Administrative control)</li> </ul>
Using of chainsaw for tree pruning	Potential noise induced deafness due to exposure of excessive noise	High	<ul style="list-style-type: none"> <li>Use of proper hearing protection (PPE)</li> </ul>

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## Resolving Hazards and Risks Identified

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PC2.3 Participate in resolving hazards and risks identified in the work area in accordance with organisational procedures  
UK2.10a Organisational procedures for risk control

Workers may participate in resolving hazards and risks in following ways:

Participating in WSH programs, such as:

- Safety awareness campaigns
- Safety awareness competitions
- Risk assessment

Providing feedback for improving organizational WSH, such as:

- Give suggestions relating to WSH
- Share problems relating to WSH
- Feedback on risk controls

Reporting WSH issues, such as:

- Unsafe work conditions
- Unsafe work practices

Observe the in-house safety rules and regulations

### Organisational Procedure for Risk Control

- Implement the recommended risk control measures shall be implemented as soon as possible.
- Prepare an action plan to implement the measures which includes a timeline for implementation and the names of the persons responsible for implementing the risk control measures.
- Monitor the plan regularly until all the measures are implemented.
- Inform all persons exposed to the risks:
  - the nature of risks; and
  - any measure or SWP implemented.
- Conduct regular inspections and process audits to make sure that risk control measures have been implemented and are functioning effectively.

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## **Workplace Safety and Health Issues, Unsafe Working Conditions and Work Practices**

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UK2.2 Typical unsafe working conditions and work practices within industry concerned  
UK1.10 Types of workplace safety and health issues

The types of Workplace Safety and Health Issues include:

- Unsafe working conditions
- Unsafe work practices/ behaviours/ acts
- Biological hazards
- Signs of infectious diseases

Workers are required to report workplace safety and health issues in accordance with the organizational procedures.

### **Unsafe Work Practices**

Unsafe acts can be regarded as a person's act with or without knowledge that can cause serious impact to the environment, other person or even himself.

Example:

- Taking shortcuts
- Not following safe work practices
- Not wearing his personal protective equipment
- Carrying heavy weights more than his capacity
- Horseplay

These acts can be controlled by provided education or training to the person.

### **Unsafe Working Condition**

This can be regarded as a physical environment that can initiate an incident resulting in injury, death or property damage.

- Absence of guard or support
- Locked emergency exit doors
- Obstruction of emergency exit
- Congested working environment
- Defecting tools, equipment or machinery
- Excessive noise, too cold environment
- Inadequate warning system
- Poor housekeeping

## Biological Hazards

Presence of bacteria, fungi, virus and parasites are by considered as biological hazards. These organisms enter into the body accidental ingestion of contaminated food, unclean hands and by contact through skin. The reaction can vary depends on the type of organism. The effect can be acute or chronic. Contact with or consumption of raw meat is common means of entry.

Example:

- Level 1 bacteria like E.Coli, bacillus. These can be removed by washing hands with disinfectants / detergents / soaps.
- Level 2 biohazards consist of viruses and bacteria that can have a limited detrimental effect on humans, example salmonella poisoning, hepatitis, measles
- Level 3 biohazard cause serious illness or even death.

## Signs of Infectious Diseases

Common signs of infectious diseases include fever, nausea, inflammation, fatigue, dizziness, skin allergies, pain in different part of body. However, some of the diseases does not show symptoms for which has to be consultant by physicians and health care professional for diagnosis.

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## Report Workplace Safety and Health Issues to Appropriate Personnel

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- PC2.2 Report Unsafe working conditions and work practices in accordance with the organisational procedures
- PC1.6 Report workplace safety and health issues to appropriate person in accordance with the organisational procedures and Workplace Safety and Health Act
- UK1.11 Workplace procedures for reporting WSH issues

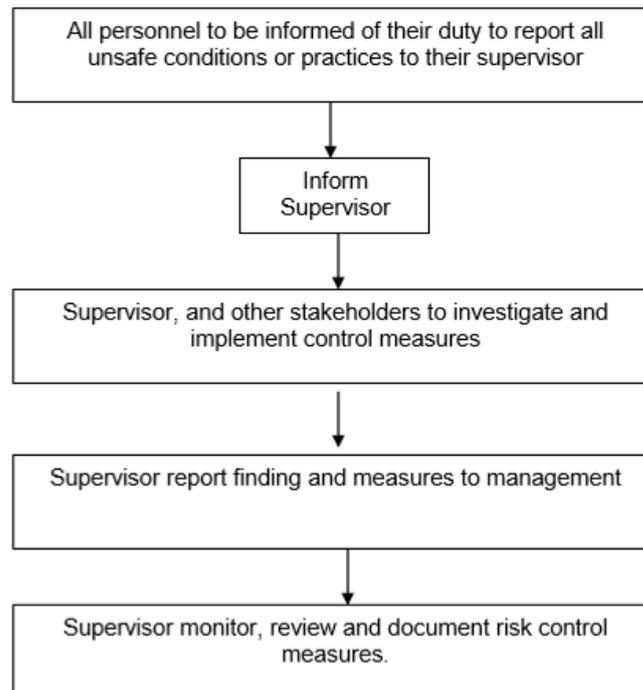
Workers can feedback unsafe conditions and practices through:

- Toolbox meeting
- Monthly safety meeting
- WSH committee meeting
- Safety inspection
- Behaviour based observation
- Directly to their supervisor or Safety and Health representatives

Things to be reported:

- Date and time
- Nature of abnormality / problem
- Location
- Equipment / personnel involved

### Organisational Procedures in Reporting of WSH Issues



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## Information Needed to Handle Workplace Emergencies

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PC2.6 Participate in identifying information needed to handle workplace emergencies  
UK2.8 Definition of emergency  
UK2.9 The types of information needed to handle emergencies  
UK2.10b Organisational procedures for dealing with emergencies

### Definition of Emergency

An emergency is a situation that poses an immediate risk to health, life, property or environment. Most emergencies require urgent intervention to prevent a worsening of the situation, although in some situations, mitigation may not be possible and agencies may only be able to offer palliative care for the aftermath.

### Types of Emergencies

- Fire or explosion
- Chemical spillage
- Unconscious person
- Infectious disease outbreak

### Non-emergency Incidents

- Near miss, close call
- Small cut / bruises due to slips & trips

### List of Essential Contact Numbers

Services	Number
SCDF (Ambulance and Fire Brigade)	@ 995
Police	@ 999
MOM OSD	@ 6317 1111
Police Hotline	@ 1800 2550 000
Ministry of Health Hotline	@ 1800 3339 999
Singapore Power Hotline	@ 1800 7788 888
Piped Gas Hotline	@ 1800 7521 800
Supervisor	@
Safety Officer	@
Guard House	@
HR Department	@
CEO or MD	@
Clinic or Doctor	@
First Aider	@

## Non-emergency Telephone Numbers

<b>Services</b>	<b>Number</b>
Non-emergency ambulance	1777
Weather Hotline	6542 7788
NEA Hotline	1800 2255 632
Dengue Hotline	1800 9336 483

## Information Needed to Handle Workplace Emergencies

- Type of emergency
- Personnel involved - Who, how many people
- Injuries / fatalities sustained - E.g. burns, broken limbs, head injuries
- Hazard involved - E.g. fire (explosive or chemicals involved), unstable structure (after collapse), toxic gas
- Location - Place of the incident;
- Brief description of the incident

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## Workplace Safety and Health Training

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PC2.7. Participate in workplace safety and health training  
UK2.11 Importance of workplace safety and health training  
UK2.12 Types of workplace safety and health training needs

The objective of workplace safety and health training is to equip work persons with the knowledge, skills and attitudes which will enable them to perform their duties in manner that does not represent a safety hazard.

### Workplace Safety Awareness Training

Focus shall be on the following:

- Safety and health policy of the organization
- Roles and responsibilities in terms of Safety and Health
- Details of Safety and Health representative
- Incident reporting procedure
- Emergency response
- In-house rules and regulations
- Importance of safety and health and consequences of deviation

### Applying First-aid

Trained first aiders are allowed to render first aid treatment for the deceased. The appointed first aiders shall attend occupational first aid course by approved training provider.

### Use of Fire-fighting Equipment

Use PASS technique while using fire extinguisher:

**P**ull the Pin at the top of the extinguisher.

**A**im at the base of the fire, not the flames.

**S**queeze the lever slowly. This will release the extinguishing agent in the extinguisher.

**S**weep from side to side. Using a sweeping motion, move the fire extinguisher back and forth until the fire is completely out.

Remember: Aim at the base of the fire, not at the flames!!!!

### Use of PPE

Workers shall be trained in donning PPE. General information to be provided to workers:

- PPE must be clean, serviceable and readily available for use.
- PPE shall fit for purpose and be specific to substance that come in contact with.

- Use chemical resistance suits/ gloves / safety boots/ goggles when handling chemicals, mixing and loading, cleaning equipment
- Hard hats and safety helmets shall be liquid proof with wide brim, have no absorbent material
- Sequence of donning various PPE's
  - Gown first
  - Mask or respirator
  - Goggles or face shield
  - Gloves

### **Handling of Toxic and Flammable Chemicals**

Chemicals can be hazardous if they are not handled or used properly. Manufacturers or suppliers have to provide information on the chemicals in the form of a safety data sheet (SDS). Workers shall be trained in storage and handling of chemicals.

### **Handling of Spills**

Workers shall be trained in responding to chemical spillage and use of spill kit. The SDS should be referred to for the proper clean-up of the spill.

### **Disposal of Chemical and Toxic Waste**

The disposal of chemicals must not be taken lightly. Waste chemicals should be disposed properly to prevent pollution and endangering the safety and health of workers. The SDS should be referred to for the proper disposal method, and disposal should comply with the requirements stipulated by the National Environment Agency (NEA).

### **Safe Operations of Overhead Equipment**

Only trained and authorized person shall operate the overhead equipment like cranes, hoist, mobile elevated work platforms.

### **Safe Operations of Powered Tools**

Only trained and authorized person shall operate the powered tools, e.g. powered drill, chainsaw, water jet.

## Learning Outcome 3: Follow Workplace Emergency Response Procedures

This chapter looks at how a worker can follow the workplace emergency response procedures.

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### Workplace Safety and Health Act and its Subsidiary Legislation and other Regulatory Requirements

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UK3.1 Workplace Safety & Health Act and its subsidiary legislation

The emergency response procedures provided by relevant regulatory requirements:

#### Ministry of Manpower

- Workplace Safety and Health Act
- WSH (General Provisions) Regulations
- WSH (Risk Management) Regulations
- WSH (Incident Reporting) Regulations
- WSH (First Aid) Regulations.

#### Singapore Civil Defence Academy

- Fire Safety Act
- Fire Safety (Building Fire Safety) Regulations (Regulations 24)
- Guidelines for Emergency Response Plan, SCDF
- Maintenance of firefighting and fire protection systems, SCDF

#### National Environment Agency

- Environmental Protection and Management Act

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## React to Emergencies at the Workplace

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- PC3.1 React to the types of emergencies at the workplace  
UK3.2 The responsibilities of a general worker in response to types of emergencies at the workplace  
UK3.5 Types of emergencies at the workplace

### Type of Emergencies

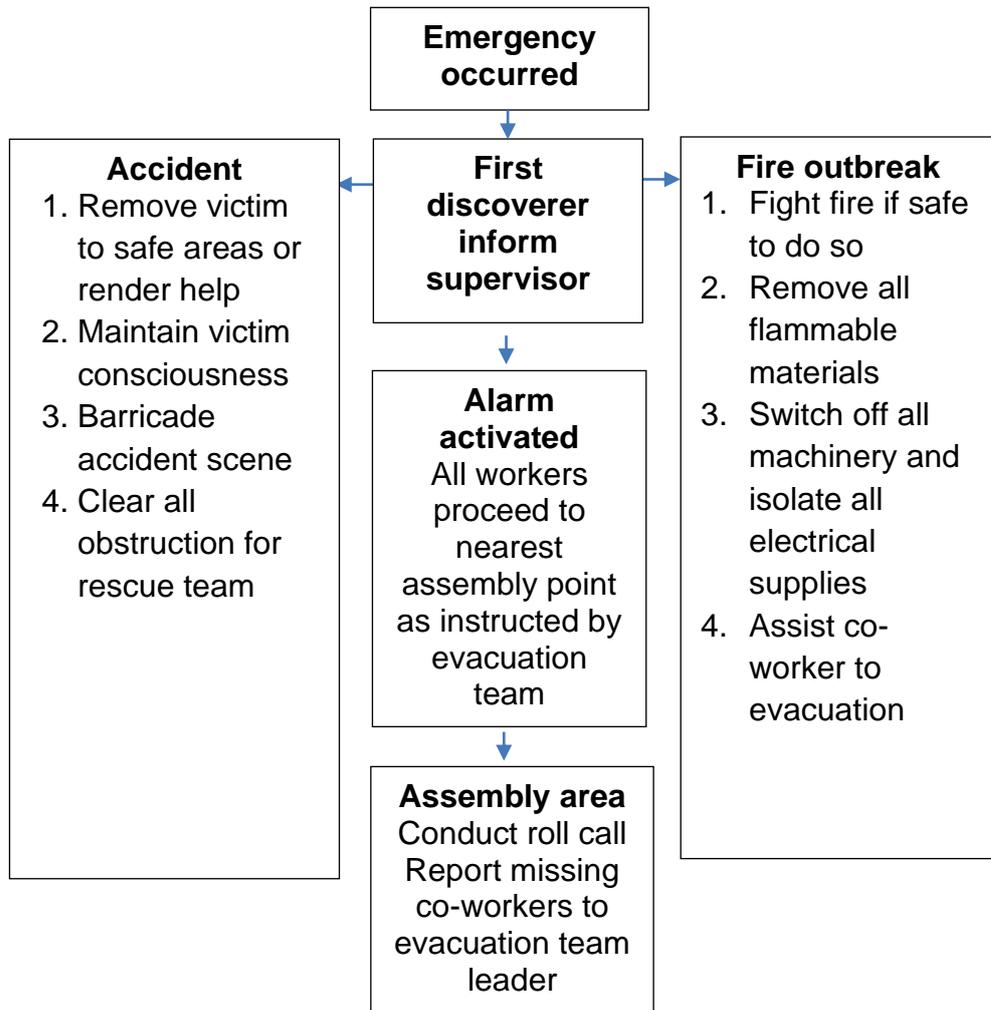
- Fire or explosion - Fire caused by welding or cutting, overloading of electrical equipment or short circuit and the presence of flammable or explosive substances in the work area
- Collapse of structures or equipment - Toppling of equipment, e.g. lorry crane, lifting equipment
- Hazardous chemical leaks or spills - Chemical spills normally occur in the course of transportation, handling, use and storage.
- Injuries - Accidentally contact with sharp objects
- Unconscious person – heat stroke, medical condition
- Fatality
- Infectious disease outbreak - Avian Influenza, seasonal flu
- Fall from heights
- Electrocutation
- Strike by lightning

### Responsibilities of General Worker

The responsibilities of a general worker in response to types of emergencies at the workplace include:

- Checking if colleague / buddy is safe and is aware of the emergency
- Leaving the workplace in an orderly manner via the nearest exit
- Evacuating to the designated evacuation assembly area
- Responding to roll-call when name is called
- If qualified to do so, assisting in the emergency where required
- Providing information as best as possible

## Organisational Procedures for Dealing with Emergencies



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## Equipment and Materials for Emergency Response

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- PC3.2 Use equipment and materials required for workplace emergency response in accordance with the organisational procedures
- UK3.7 Type of PPE to be worn in the event of emergency at the workplace

Different types and uses of equipment and materials required for workplace emergency response.

### Personal Protective Equipment

Type of PPE	Examples	Functions
Respiratory protector	N95 and surgical masks, air purifier, powered air purifying, supplied air, self-contained breathing apparatus (SCBA)	To prevent inhalation of hazardous emission of gas, bacteria, viruses or dust.
Eye protection	Face shield and goggles	To protect against incidental splashes to face and eyes.
Hand protection	Disposable gloves, leather gloves, heat resistant gloves	To protect against burns or exposure to e.g. hot surfaces, blood or bodily fluids.
Foot protection	Safety boots, anti-slip footwear	To protect against incidental struck by heavy objects and slip and fall due to wet condition.
Head protection	Hard hats/safety helmets	To protect head against falling objects or knock against objects.

Fire extinguisher, fire hose, fire alarm system and smoke alarm system in the event of fire emergency:

### Fire Extinguisher

- Class A Fires: Ordinary combustibles e.g. wood, paper, cloth
- Class B Fires: Flammable liquids, grease e.g. gasoline, paints and oils.
- Class C Fires: Electrical equipment e.g. motors, switches.
- Class D Fires: Combustible metals e.g. Magnesium, phosphorus and iron.

## Fire Hose

- All factories, commercial and industrial buildings are equipped with sufficient numbers of fire hoses at each level. It is normally housed in fire hose cabinet.
- While using the hose, turn on the valve and release all the hose to its maximum length.

## Fire Alarm System

- Fire alarm system is activated at the call point.
- Manual call points are clearly identifiable and simple to use with instruction on it like “Break the glass and press to sound the alarm”.

## Smoke Alarm System

- A fire detector installation is to detect the fire at initial stage when it starts smoking. The smoke reached the detection system and then will automatically trigger the alarm to notify the fire.
- The detectors then can significantly reduce the impact of the fire and property or material loss.

Barricades and warning signs to forewarned hazards and prevent access and falling from height.

## Barricades

Barricades are installed to prevent people from entering an area that may be hazardous or high risky activity in operation.

Example:

- Overhead activities
- Spillage due Use of chemicals / painting
- Collapse of building
- Fatal accident

## Warning Signs

Warning signs are to be provided to inform workers:

- Need to wear personal protective equipment (e.g., ear plugs during grinding).
- No smoking or naked lights.
- Safety boots before entry.

## First-aid Kits

First aid box is to be provided where there are more than 25 workers. Items in the box include:

Items in First-aid Box	
Individual wrapped sterile adhesives dressings	Disposable gloves
Crepe bandages	Eye shield
Absorbent gauze	Eye pads
Hypoallergenic gauze	Resuscitation mask
Triangular bandages	Sterile water/saline
Scissor	Torchlight
Safety pins	

## Chemical Spill Kit

- Contains chemical absorption materials or containments kits to contain and clean spills.
- Spillage kits offer a simple and effective way to deal with spillages of hazardous substances, for example cytotoxic drugs, blood and bodily fluids.

## Biological Hazard Protective Suit

Biological hazard protective suit to protect against exposure to biological hazards.

- Provides protection against dual-use industrial biological warfare agents.
- Garment is designed for one operational use.
- Coverall must be disposed of after any chemical liquid or vapour exposure.

## Disinfectants

- There are different types of disinfectants that is used to destroy any living organism that cause infections. Common disinfectant is Chlorine or otherwise called as bleach.
- Alcohols, Phenolics, Quaternary ammonium salts and oxidizing agents are type of disinfectant available.

## N95 Respirators

- N95 respirators are disposable respiratory protectors. Respirators filter the air breathe in to help protect from microorganisms including bacteria and many viruses.

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## **Activate Emergency Services**

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PC3.3 Activate emergency services in the event of emergency at the workplace in accordance with the organisational procedures

Types of emergency services to be activated in the event of emergency:

- Main police stations: 999
- Fire or emergency ambulance: Call 995

To facilitate a faster response to the patient, the 995 caller should do the following:

- Identify yourself and provide a telephone contact number.
- Provide the location and specific address of the patient found.
- Describe the patient's signs and symptoms briefly.
- Hang up the telephone only after the "995" Control Room Operator does so.
- Standby to assist if required.

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## Follow the Instructions in the Event of Emergency

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PC3.4 Follow the instructions given by authorized personnel in the event of emergency at the workplace

UK3.4 The organisation-based procedures in responding to emergency at the workplace

### Organisational Procedures in Responding to Emergency

- Reporting workplace emergency.
- Participating in emergency response exercise at the workplace.
- Responding to infectious disease outbreak at the workplace.

### Fire or Explosion

- On discovery of a fire or explosion:
- Combat the fire if safe to do so. Make sure you have trained to use the fire extinguishers.
- Raise the alarm by breaking the glass call point to activate the fire alarm.
- Dial the in-house emergency number.
- Escape route should be kept open should the fire escalate.

In the event of a fire alarm:

- Evacuate using fire emergency exits
- Proceed to the assembly area.
- Wait for Role Call and Instructions of the Incident Site Commander
- Find out the evacuation plan
- Know where the assembly area is

### Collapse of Structures or Equipment

- Stop all work and switch off machines and equipment immediately.
- Vacate the workplace and gather at the assembly area.
- Do not run or carry any portable tools during evacuation.

### Hazardous Chemical Leaks or Spills

- Take a thorough shower.
- Seek medical treatment immediately.
- Place exposed clothing and shoes in tightly sealed containers.
- Report to supervisor.

### Injuries/Unconscious Person

- Dial in-house emergency number.
- Provide basic information which include:
- The location

- Person injured
- Condition of the person injured.
- Follow instructions given by person manning the emergency number.

### Fatality

- Inform supervisor or security personnel immediately
- Body of the deceased including immediate surroundings not to be moved or disturbed in any way.

### Infectious Disease Outbreak (e.g. Avian Influenza)

- Seek medical treatment if experience flu-like symptoms.
- If you suspect someone has Avian-Flu, take him/her to the nearest doctor.
- If you developed flu-like symptoms, stay at home and call a doctor.
- Practise good personal hygiene which include:
  - hand hygiene
  - wear surgical mask if unwell
  - conduct self-temperature check
- Maintain contacts tracing log
- Follow chain of command in reporting suspected cases at workplace.

### Fall from Heights

- Prompt rescue shall be provided for personnel who have fallen by contacting 999 or radioing for help.
- No work shall be performed where an emergency cannot be immediately observed and prompt rescue assistance summoned.
- Unless casualty is in a position which exposes him to further danger, do not attempt to move a patient with a suspected broken bones or injured joints.
- Wait for medical attention to arrive.

### Electrocution

- On finding a person in electric shock raise the alarm by calling for help from colleagues.
- Switch off the power if possible. Push the person away from the conductor using a wooden object.
- Call for an ambulance.

## Strike by Lightning

- If a person is struck by lightning, call 999 and get medical care immediately.
- Cardiac arrest and irregularities, burns and nerve damage are common in cases where people are struck by lightning.
- However, with proper treatment, including CPR if necessary, most victims survive a lightning strike. Unlike electrocution, you are in no danger helping a lightning victim. The charge will not affect you.

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## **Participate in Organisational Emergency Response Exercise**

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PC3.5 Participate in the organisational emergency response exercise in accordance with the guidelines provided by the relevant regulatory requirements

The organization will have emergency response plan elaborating on the following:

- Potential emergency situation
- Emergency response procedure
- Details of Fire fighting team, First aid team
- Information on authorities like NEA for Chemical spill; SCDF, Police; MOM; Ambulance services, nearby medical facilities

All the staff must follow according to the organizational emergency response plan. Emergency exercises where you can involve are

- Fire fighting
- Rescue operation
- Containment of chemical
- Hazardous material release
- Medical and first aid activities (if trained)

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## Infectious Disease Outbreak Control

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- PC3.6 Follow infectious disease outbreak control at the workplace in accordance with the guidelines provided by relevant regulatory bodies
- UK3.3 The role of a general worker in response to infectious disease outbreak
- UK3.6 Importance of practicing good hygiene at the workplace
- UK3.8 The precautionary steps to take to prevent spread of infectious disease at the workplace
- UK3.9 Types of alert codes stipulated by Ministry of Health Singapore

### Precautionary Steps to Prevent Spread of Infectious Disease at Workplace

- Maintaining environmental cleanliness to minimise transmission of virus, including frequent disinfection of common areas.
- Advising employees to maintain high standards of personal hygiene, such as washing hands frequently with soap and water, and covering their noses and mouths with a piece of tissue paper when they cough or sneeze.
- Advising employees who are not feeling well to seek medical attention.
- Considering the needs of employees who might be at higher risk of severe illness and complications due to infectious disease and take appropriate steps to enable them to work, while minimising their risk of infection at the workplace.
- Considering taking precautionary measures such as staggering working hours.
- Urging employees on medical leave not to return to the workplace. This socially responsible measure would allow employees to recover fully, reduce the risk of infecting other colleagues, and minimise business disruptions at the workplace.
- Understanding the types of alert codes stipulated by Ministry of Health.

### Role of General Worker in Response to Infectious Disease Outbreak

- Seek medical attention when unwell.
- Practice good hygiene in workplace
- Use PPE as appropriate
- Conduct self-temperature check
- Maintain contacts tracing log
- Maintain designated isolation/empty room for suspected infectious disease case
- Maintain anti-viral, disinfectants and PPE stockpile as appropriate
- Follow the chain of command in reporting suspicious infectious disease case at the workplace

## Understanding DORSCON Flu Alert Codes

The DORSCON Alert codes (Disease Outbreak Response System) are a mechanism for risk management as they describe the risk of acquiring an infectious disease. It provides a guide for planning and execution in the event of an influenza pandemic.

### a. Alert GREEN Level 0 (WHO Phase 1)

No novel influenza virus outbreaks anywhere in the world.

### b. Alert GREEN Level 1 (WHO Phase 2 - 3)

At this level of alert, there may be isolated external or local cases of animal-to human spread. Recommended actions include:

- Pandemic preparedness team to oversee business continuity.
- Increase personal hygiene awareness.

### c. Alert YELLOW (WHO Phase 4)

Inefficient human-to-human transmissions of influenza caused by a novel virus requiring close and sustained contact to an index case. However, risk of import into Singapore is increased. Further spread can be prevented through public health measures to isolate cases and quarantine contacts.

Recommended actions include:

- Appoint flu manager
- Update staff policies on travel advisory
- Implement screening and isolation procedures (include travel history checks)
- Self-monitoring of temperatures by staff.
- Pandemic preparedness stock up on gloves, masks.

### d. Alert ORANGE (WHO Phase 5)

Globally and/or locally, human-to-human transmission. Virus is becoming increasingly better adapted to humans but may not yet be fully transmissible, requiring close contact with an index case.

Recommended actions include:

- Update staff regularly on health advisories by authority.
- Separate key staff into two teams and minimal contact between both teams.
- Staff to stay at home if unwell.
- Self-monitoring of temperatures by staff.

#### e. Alert RED (WHO Phase 6)

Widespread infection. The virus is fully transmissible between humans. There is an import into Singapore. High risk of acquiring the disease from the community. Recommended actions include:

- Work from home arrangements
- Activate local housing arrangements for foreign workers
- Activate succession plan
- Make arrangements for counselling support.

#### f. Alert BLACK (WHO Phase 6)

Alert BLACK is sounded when there are high rates of severe disease and deaths. Economic activities and schools are severely disrupted.

Green	No novel influenza virus outbreaks
Yellow	Inefficient human-to-human transmissions of influenza caused by a novel virus
Orange	Human-to-human transmission
Red	Wide spread infection. The virus is fully transmissible between humans
Black	High rates of severe disease and deaths

## Appendix A



### Learning Activity 1

#### Identify the Personal Protective Equipment and Safety Devices

##### Session Duration

45 minutes

##### Delivery Procedure

- This activity will take place in a park or garden.
- Once at the designated location, learners are to form groups of 3-4 learners per group.
- Learners will be shown various activities commonly encountered in the landscape industry. Some sample activities are shown in the photos below. The activities encountered may vary, depending on the date and time of the learning activity.
- Observe the activities from a safe distance.
- In your groups, discuss the suitable PPE and safety devices to be used for the activities given and record your findings.
- Do not wander off without informing the trainer.
- For the last 10mins, each group will present the information compiled to the class.
- Ask questions and seek clarification of any points that are unclear.

Note: In the event the site visit is not possible, the learning activity will be conducted in the classroom, using the photographs/videos of activities for the discussion.

Activity	Recommended PPE and Safety Devices
<p>Grass cutting</p> 	
<p>Using chainsaw for tree pruning</p> 	
<p>Handling of chemicals</p> 	

## Appendix B



### Learning Activity 2

#### Identify the Potential Hazards for the Activities

##### Session Duration

45 minutes

##### Delivery Procedure

- This activity will take place in a park or garden.
- Once at the designated location, learners are to form groups of 3-4 learners per group.
- Learners will be shown various activities commonly encountered in the landscape industry. Some sample activities are shown in the photos below. The activities encountered may vary, depending on the date and time of the learning activity.
- Observe the activities from a safe distance.
- In your groups, discuss the potential hazards for the activity given and record your findings.
- Do not wander off without informing the trainer.
- For the last 10mins, each group will present the information compiled to the class.
- Ask questions and seek clarification of any points that are unclear.

Note: In the event the site visit is not possible, the learning activity will be conducted in the classroom, using the photographs/videos of activities for the discussion.

Activity	Potential Hazards
<p>Grass cutting</p> 	
<p>Using chainsaw for tree pruning</p> 	
<p>Handling of chemicals</p> 	

## Appendix C



### Learning Activity 3

#### Identify and Report Unsafe Conditions and Unsafe Work Practices

##### Session Duration

30 minutes

##### Delivery Procedure

- Get into groups of 3-4 learners.
- Assign the role of supervisor, worker and observer in the group.
- Discuss the unsafe conditions and unsafe practices and record your findings.
- For the last 10 minutes each group will conduct the role play.
- Observer will observe and record the role play.
- Ask questions and seek clarification of any points that are unclear.

##### Scenario

During work, you observe your co-worker who is standing on the work platform of crane does not secure the body harness on the designated anchorage. He is stretching his body to cut a branch. In addition, the work area is not barricaded. Identify the unsafe condition and unsafe work practice. Report the WSH issues to your supervisor accordingly.



## Appendix D



### Learning Activity 4

#### React to the Emergencies

##### Session Duration

45 minutes

##### Delivery Procedure

- Get into groups of 3-4 learners.
- Each group will be given an emergency situation.
- Discuss the procedure in responding the emergency for the emergency situations given and record your findings.
- For the last 10 minutes, each group will present the information compiled to the class.
- Ask questions and seek clarification of any points that are unclear.

Emergency Situation	Procedure in responding emergency
Fire or Explosion	

Injuries/Unconscious Person	
Infectious Disease Outbreak (e.g. Avian Influenza)	