International Health and Safety at Work
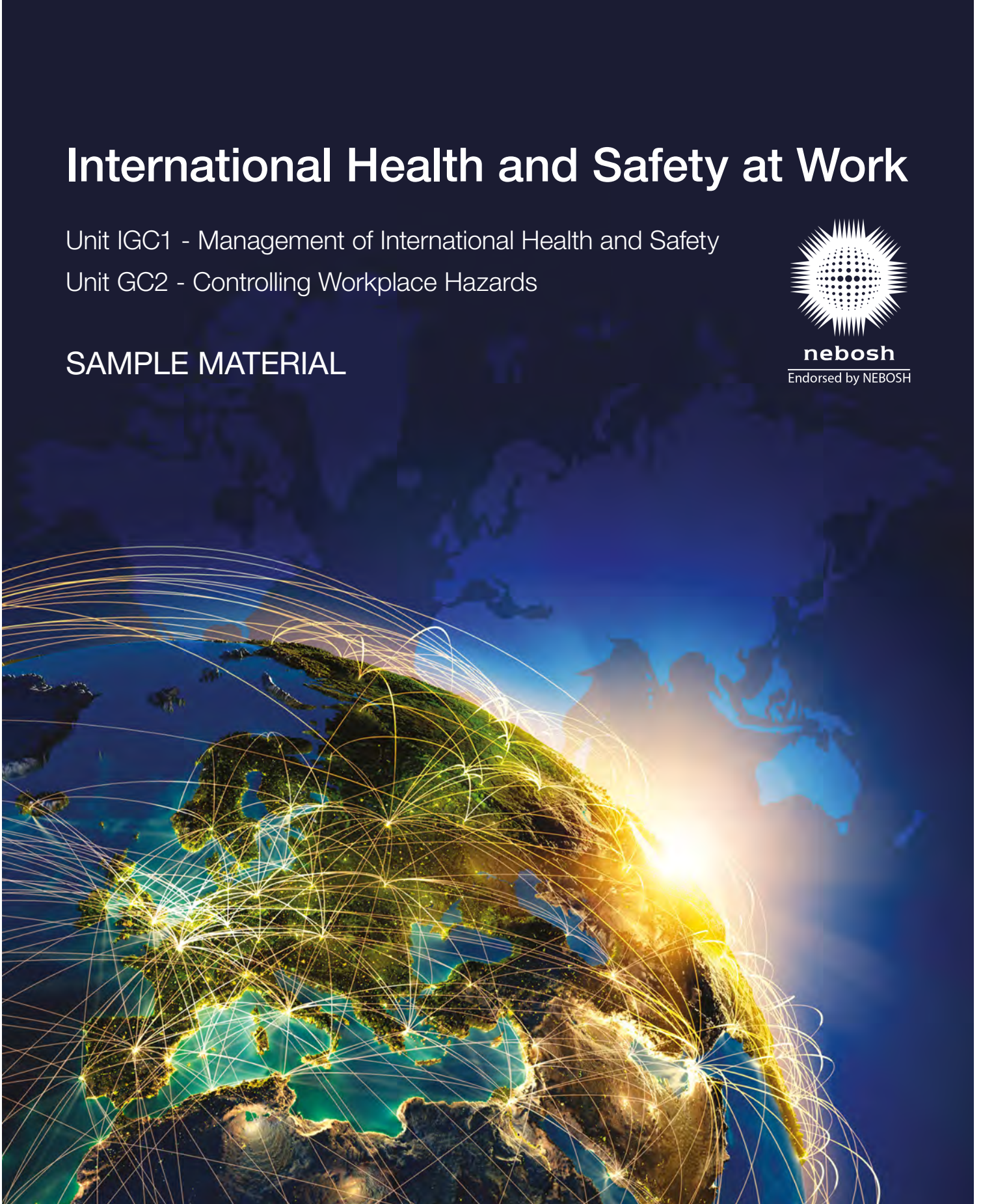
Unit IGC1 - Management of International Health and Safety

Unit GC2 - Controlling Workplace Hazards

SAMPLE MATERIAL

nebosh
Endorsed by NEBOSH

cases in civil courts and delayed payments to workers. This form of insurance also motivates the employer to maintain and promote good standards of health and safety in the workplace as the amount they pay into the scheme depends on what they do to prevent harm and the success of the preventive measures.

1.3 The role of national governments and international bodies in formulating a framework for the regulation of health and safety

The International Labour Organisation is a UN body that is made up of representatives from member countries of the UN. It sets out international treaty agreements in the form of conventions and member countries confirm their acceptance of the conventions by ratifying them. They agree to be bound by conventions that they have ratified. Member countries use the ILO conventions to structure and guide their approach to health and safety. This is particularly useful to emerging countries that have not gained experience in the practices necessary to manage health and safety in a complex industrialised country. It saves them developing their own approach through their own experience, which would be both painful and costly in terms of human life.

The ILO has established a number of conventions and recommendations, for example those that relate to the management of health and safety, control of chemicals and the work environment, and construction activities. ILO conventions set out what should be done by member countries at a national level and what should be done at employer level. Workers' rights and responsibilities are included within the conventions. The ILO Occupational Safety and Health Convention C155, 1981, establishes broad requirements for member countries to follow to ensure health and safety requirements are set into national laws.

Article 8 of Convention C155 requires:

"Each Member shall, by laws or regulations or any other method consistent with national conditions and practice and in consultation with the representative organisations of employers and workers concerned, take such steps as may be necessary to give effect to Article 4 of this Convention."

Article 4 of Convention C155 requires:

"A coherent national policy on occupational safety, occupational health and the working environment."

National Governments of member countries establish laws in a form that suits their culture, perspectives and level of economic development. In the past, national legislation has concentrated on specific problems that have occurred in specific industries. More recently, national legislation is being introduced in some countries that better reflects the broad requirements set out in ILO Occupational Safety and Health Convention C155, 1981, and encourages employers to manage the risks they create. A good example of this would be the Malaysian Occupational Safety and Health Act 1994. Legislation written in this way is designed to make employers put in arrangements to manage the risks without further specific national legislation detailing actions for each risk.

EMPLOYERS' RESPONSIBILITIES

According to the ILO Occupational Safety and Health Convention C155, 1981, employers have multiple responsibilities. These include ensuring that, so far as is reasonably practicable, the workplaces, machinery, equipment and processes under their control are safe and without risk to health. They must also ensure that, so far as is reasonably practicable, the chemical, physical and biological substances and agents under their control are without risk to health when the appropriate measures of protection are taken.

Figure 1-1-7: Storage of gas cylinders.
Source: RMS.

This includes provision, where necessary, of adequate protective equipment and protective clothing to prevent risk of accidents/incidents or adverse effects on health. Employers must also provide measures to deal with emergencies and accidents/incidents, including adequate first-aid arrangements.

4.2 Investigating incidents

INCIDENT INVESTIGATION AS A REACTIVE MONITORING MEASURE

Role and function

The reasons for investigating accidents are the same as for accident prevention, that is:

- Moral.
- Economic.
- Legal.

The legal reasons for investigation of accidents/incidents will include the need to prevent harm to workers and therefore the need to prevent a recurrence of accidents/incidents. The findings of an investigation should be applied to prevent recurrence by improving workplace standards, procedures and training requirements.

In addition, in some countries there is a specific legal requirement to report accidents, dangerous occurrences and ill-health to external organisations such as competent authorities, enforcement agencies, insurance institutions and worker compensation organisations. The information needed for the report will cause the employer to be involved in an investigation into the circumstances leading up to an incident.

Role of investigation

The role of investigation includes:

- Prevention of recurrence.
- Identify weaknesses in health and safety systems and procedures and updating of risk assessments.
- Establish legal liability, prepare a defence and ensure legal obligations are complied with.

- Determine the economic loss caused by the accident.
- Data gathering.
- Identification of trends.
- Discovery of underlying and root causes.
- Demonstrates commitment by the management to provide a safe place of work.
- To establish if internal disciplinary procedures are necessary.
- For staff morale, not carrying out an accident investigation will have a negative effect on safety culture as workers will assume the organisation does not value their safety.

Function of investigation

Ideally all accidents/incidents should be investigated. A study of minor injuries and near-misses can often reveal a major hazard, as the occurrence and severity of injury is a random happening. The 'accident triangle' discussed in **figure 1-4-9** also underpins the importance of accident investigation. The degree of investigation may well vary with the degree of injury or damage, but should be based on the worst possible case of injury which is reasonably foreseeable as a result of the accident in question.

The objectives of any investigation will vary according to the circumstances, but it will always include the following points:

- The need to establish the causes of an accident, both immediate and underlying, in order that appropriate preventative action can be taken.
- Identify weaknesses in current systems so that standards can be improved.
- Determine economic losses.
- Recommend actions to prevent a recurrence.
- Determine compliance with statutory requirements or with company regulations.
- Improve staff relations by demonstrating commitment to health and safety.
- Acquire statistics.
- Prepare for criminal/civil action and provide insurance/worker compensation data.

The role and directive for the investigation of this nature should never seek to blame any individual or group of individuals. If human error is believed to be a significant cause, the reasons for this must be investigated. Lack of knowledge, training or unsuitability for the job may be the causes of this error. These are management and not worker failings. Only when these have been evaluated can the conclusion of wilful and intentional acts or omissions be considered.

	Advantages	Disadvantages
Internal audits	- Internal audits ensure local acceptance to implement recommendations and actions improving ownership of issues found. - The auditor often has intimate knowledge of the hazards and existing work practices. - An awareness of what might be appropriate for the industry. - Familiarity with the workforce including their strengths and weaknesses. - Relatively low cost and easier to arrange. - Builds internal competence.	- May not possess auditing skills. - May not be up to date with current legislation and best practice. - The auditor may also be responsible for implementation of any proposed changes and this might inhibit recommendations because of the effect on workload. - May be subject to pressure from management and time constraints
External audits	- External audits are usually impartial; auditors will have a range of experience of different types of work practices. - May be able to offer solutions to what might be considered unsolvable problems within. - Not inhibited by criticism. - Will assess the organisation's performance without prior bias. - Will more readily identify norms to working which are no longer appropriate (someone whose opinion is not prejudiced by past knowledge of the company).	- Need to plan well to identify nature and scope of the organisation. - Individuals may not be forthcoming, be nervous or resistant to discussing their workplace with an outsider. - May seek unrealistic targets. - May be expensive.

Figure 1-5-8: Advantages and disadvantages of external and internal audits. Source: RMS.

REVIEW

Identify THREE tips to bear in mind when setting up and conducting internal health and safety audits using a team.

ACTIONS TAKEN FOLLOWING AUDIT

The outcome from an audit should be a detailed report of findings and recommendations (as discussed previously) to improve or maintain the health and safety management system. A structure and approach to the report should be agreed at the pre-audit stage.

The final report should give a clear assessment of the overall performance of the organisation. It should identify deficiencies and make recommendations for improvement. It should also identify the observed strengths and suggest how they can be built upon.

All audit reports need to be accurately and clearly communicated. In addition to the provision of a detailed written report a verbal presentation of the report may be provided soon after the close of the audit, in order to give an early opportunity for management to learn and take action.

(Sample) Overall Compliance *(ACT)* AUDIT 1 2 3
(Single Location)

These marks are obtained from totalling the (total achieved marks and total maximum mark) from audit check list matrix (by location) for each section heading or directly from audit check list (whole organisation) for each section heading, depending on which is used.

Enter the totalled achieved marks in column 1 for each section heading (total achieved marks). Enter the totalled maximum obtainable marks in column 2 for each section heading (total maximum marks).

This compliance matrix is used to show the overall compliance of the organisation by section headings only.

Determine the percentage :

$$\frac{\text{Total Achieved Marks}}{\text{Maximum Obtainable Marks}} \times 100$$

and enter in column 3 (Percentage).

Main Section Heading	Column 1 Total Achieved Marks	Column 2 Maximum Obtainable Marks	Column 3 Percentage
Administration and Procedures	78	160	49
Legislation Compliance	90	210	75
Environment	58	110	53
Equipment	60	120	50
Materials Handling	80	100	80
Facilities	88	90	98
Special Risks	75	100	75
External	76	120	63
Environment - Office	70	90	78
Facilities - Office	60	110	55
Special Risks - Office	N/A	N/A	N/A
Totals	735	1210	
Organisation Compliance			61

Figure 1-5-9: Sample page from the RMS Audit 123 system. Source: RMS.

HEALTH AND WELFARE PROVISIONS

The definitions of health and welfare have been covered in **Unit IGC1 - Management of International Health and Safety**. In this section welfare provision means access to facilities and services that will ensure the worker's health and welfare. Conventions, Recommendations and Codes of Practice will dictate, or give guidance on local standards to be achieved. The provision of first-aid is often considered as part of an employer's duties to provide health and welfare provision. The topic of first-aid is covered in **Unit IGC1 - Management of International Health and Safety**.

Supply of drinking water

An adequate supply of wholesome drinking water or some other wholesome drink must be provided in the workplace. The supply needs to be accessible to workers. Whenever the distribution of running drinking water is practicable, preference should be given to this system. If water is not provided in the form of a fountain,

Figure 2-1-1: Safe Drinking water sign.
Source: Rivington signs.

then drinking vessels must also be provided. The supply outlet from taps should be labelled, 'Suitable for drinking', or 'Unsuitable for drinking' as appropriate. ILO Hygiene (Commerce and Offices) Recommendation R120 sets out additional useful advice that should be considered when meeting the requirement for drinking water:

"Recommendation 29:
1) Any containers used to distribute drinking water or any other authorised drink should:

    a) Be tightly closed and where appropriate fitted with a tap.

    b) Be clearly marked as to the nature of their contents.

    c) Not be buckets, tubs or other receptacles with a wide open top (with or without a lid) in which it is possible to dip an instrument to draw off liquid.

    d) Be kept clean at all times.

2) A sufficient number of drinking vessels should be

provided and there should be facilities for washing them with clean water.

3) *Cups, the use of which is shared by a number of workers should be forbidden.*

Figure 2-1-2: Drinking water.
Source: Semcog.
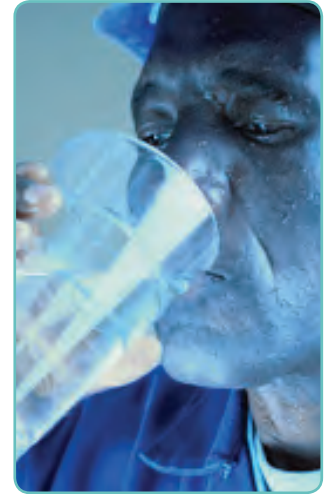
Figure 2-1-3: Drinking water.
Source: Waterlogic.

Recommendation 30:
1) *Water which does not come from an officially approved source for the distribution of drinking water should not be distributed as drinking water, unless the competent health authority expressly authorises such distribution and holds periodical inspections.*

2) *Any method of distribution other than that practised by the officially approved local supply service should be notified to the competent health authority for its approval.*

Recommendation 31:
1) *Any distribution of water not fit for drinking should be so labelled at the points where it can be drawn off.*

2) *There should be no inter-connection, open or potential, between drinking water systems and systems of water not fit for drinking."*

Figure 2-1-4: Do not drink sign.
Source: ISO 7010.

movements will be particularly awkward and strenuous as they can involve large heavy items.

Assessment of a display screen equipment workstation

Display screen equipment (DSE) is a device or equipment that has a display screen for graphics, words or numbers. DSE includes both conventional display screens and those used in the latest technologies such as laptops, touch-screens and other similar devices. The main risks that may arise in work with DSE are musculoskeletal disorders such as back pain or upper limb disorders, visual fatigue, and mental stress. While the risks to individual users are often low, they can still be significant if good practice is not followed.
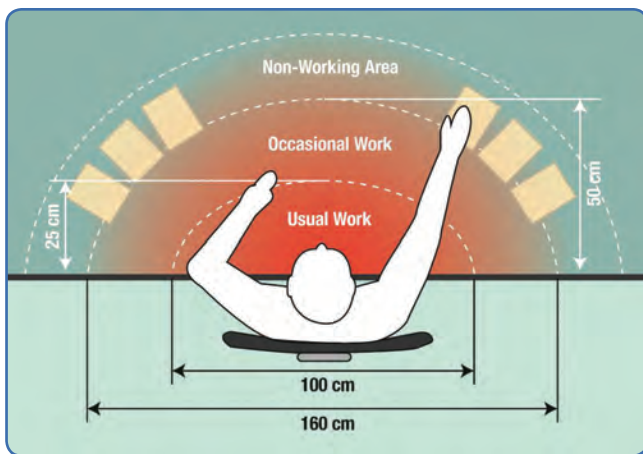

Figure 2-3-2: Ergonomic workstation assessment.
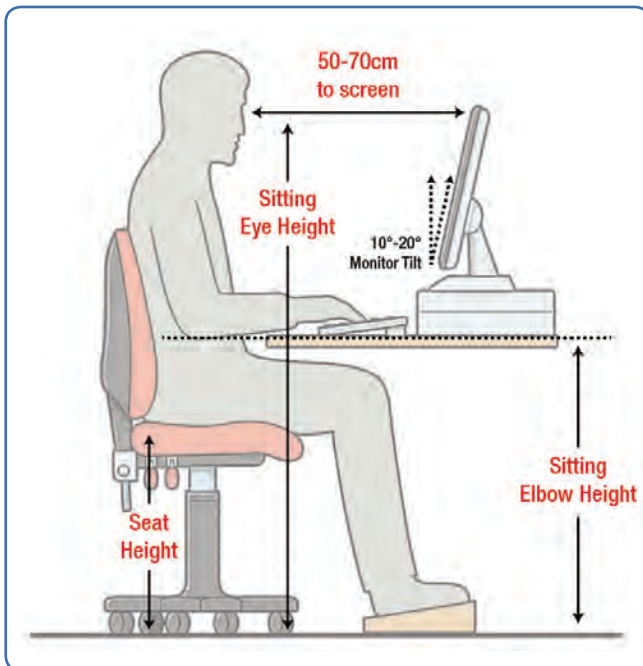Source: RMS.

Figure 2-3-3: DSE user/workstation assessment.
Source: RMS.

Assessment of a DSE workstation should take account of:

DISPLAY SCREENS

- Is the monitor in good working condition including swivel and tilt functions and screen quality?
- Is the monitor at the correct height? Can the height be adjusted?
- Is the screen size suitable for all tasks and are characters easy to read from the working distance?
- Is the screen free from distracting reflections or glare?
- Does the user know how to adjust brightness and contrast?
- If there is a multi-screen set-up is it well configured for efficiency and safe working postures?

KEYBOARD

- Is the keyboard separate from the screen?
- Is the type of keyboard appropriate to the user?
- Is the keyboard in good working condition, including tilt and the keys being easy to read?
- Is the keyboard comfortable to use?
- Is a wrist rest provided?

MOUSE

- Is the mouse in good working condition?
- Is the mouse comfortable to use, including pointer speed?
- Is the type of mouse provided appropriate to the user?

SOFTWARE

- Does the software work reliably?
- Is the software suitable for the tasks?
- Has the user received sufficient training to use the software?

DOCUMENT WORK

- Does the user use a suitable document holder, if needed?

DESK

- Is the work surface free from clutter and well organised?
- Is the work surface large enough for all items to be correctly positioned?
- Is there sufficient off-desk storage for files and folders?
- Is the area under the desk free from obstructions?
- Is the desk height adjustable?

CHAIR

- Does the chair have a working seat height adjustment?

Figure 2-7-54: Goggles.
Source: Gempler's.

Figure 2-7-55: Spectacles.
Source: 3M.

Figure 2-7-56: Eye, ear and head protection.
Source: Speedy Hire plc.

Footwear - safety boots/shoes

Foot and ankle injuries are common in the workplace. Inadequate protection and a lack of discipline on the part of the wearer commonly cause these. There are many types of safety footwear on the market, many of them offering different types of protection. It is vital that the nature of the hazard is considered when selecting appropriate footwear. Here are some common examples:

- Falling objects - steel toecaps.
- Sharp objects - steel insoles.
- Flammable atmospheres - anti-static footwear.

- Electricity - rubber soles.
- Spread of contamination - washable boots.
- Wet environments - impermeable wellingtons.
- Slippery surfaces - non-slip soles.
- Cold environments - thermally insulted soles.

Ear protection

See 'GC2 - Element 8 - Physical and psychological health hazards and risk control' for details on ear protection.

Personal hygiene and protection regimes

Personal hygiene and good housekeeping have an important role in the protection of the health and safety of the people at work. Laid-down procedures and standards are necessary for preventing the spread of contamination. The provision of adequate washing/showering facilities is important to remove contamination from the body. The provision of laundry facilities for overalls and PPE reduces the effect of contamination. Barrier creams and suitable hand protection are important considerations for chemical and biological risks.

Where personal hygiene is critical, for example, when stripping asbestos, a 'three-room system' is employed. Workers enter the 'clean end' and put work clothes on, leaving by means of the 'dirty end'. When work has been completed they return by means of the 'dirty end', carry out personal hygiene and leave by means of the 'clean end'.

The ILO "Code of Practice for Safety in the Use of Chemicals at Work" requires employers to provide adequate welfare facilities and makes particular reference to good personal hygiene practice, *(see figure 2-7-57)*.

> "To reduce the risk of ingesting chemicals hazardous to health, workers should not eat, chew, drink or smoke in a work area that is contaminated by such chemicals"

Figure 2-7-57: Control measures for chemicals, personal hygiene.
Source: ILO, Code of Practice for Safety in the Use of Chemicals at Work.

Vaccination

Certain occupations, such as water treatment/sewage workers, the medical profession, have a higher than average risk from some biological hazards. Staff in these occupations may need to be immunised against common high risks, for example, hepatitis B.

While vaccination (if available) can be an effective way of preventing ill-health from exposure to biological agents, it is an intrusive control. Employers may need the permission of workers before adopting this method, but workers may not always be willing to receive vaccinations, in the knowledge that vaccination may in some individuals cause severe side effects or death.