Environment, Health & Safety at Construction Site

Risks to Health Within a Construction Environment

Common Risks to Health and Safety

The most common illnesses, diseases and injuries within the construction industry include musculoskeletal disorders, falls from height, respiratory problems caused by exposure to a substance hazardous to health, dermatitis, hearing problems associated with exposure to high levels of noise and dexterity or repetitive strain injuries caused by hand arm vibration.

Image credit: http://www.safetyforward.co.uk

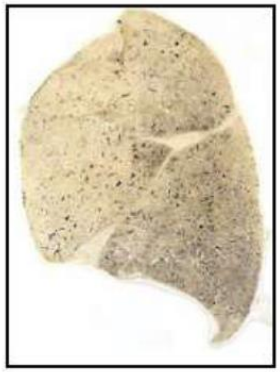

Figure 1.2 Normal lung

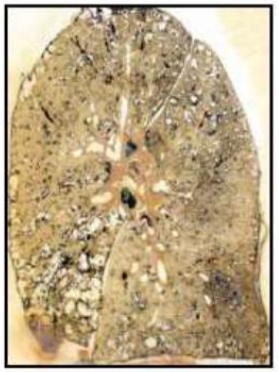

Figure 1.3 Heavy exposure to asbestos

Figure 1.4 Lung cancer

Figure 1.5 Mesothelioma due to asbestos exposure

Asbestos is a **hazardous material** that can lead to a range of **respiratory (lung related) illnesses** when it is **inhaled**. It becomes hazardous when an operative is exposed to airborne asbestos fibres. You should never work with asbestos unless you are trained, qualified, competent and properly supervised if necessary. and colours

There are three types of asbestos which have been commonly used in the UK. They are often identified by colour: **crocidolite is blue, amosite is brown and chrysotile is white.** All types of asbestos are dangerous but crocidolite and amosite are considered to be the most hazardous.

COSHH

Harmful or irritant material†

Corrosive material

Toxic material

The Control of Substances Hazardous to Health **(COSHH)** Regulations 2003 apply to a wide range of substances, materials and preparations that have the potential to cause harm when inhaled, ingested, absorbed or come into contact with the skin. Hazardous substances can occur in many forms, including **solids, liquids, vapours, gases and fumes.**

The COSHH regulations require a **COSHH assessment** to be carried out for each substance that has the potential to cause harm. The assessment must contain information on safe systems of work, storage arrangements and health surveillance provisions and should involve everyone who is likely to come into contact with the substance.

Alcohol and Drugs

Being under the influence of alcohol or drugs can increase the risks of accidents and seriously reduce alertness and concentration. This not only puts the person under the influence at risk of being injured, but also increases the likelihood that those around them may be injured by their actions. Most construction sites adopt a strict no drugs or alcohol policy.

Wash Your Hands

When working on a construction site **you should regularly wash your hands with soap and water,** particularly before eating. This can reduce the chance of you contracting diseases such as Weils disease which is caused by exposure to rat or cow urine. Many construction sites now have designated hand wash stations that offer barrier creams, soap, sanitiser and sun lotion.

Situational Awareness

Being aware of potential hazards and threats in an unfamiliar environment is known as having **situational awareness**. It is particularly important to be aware of your surroundings in a construction environment as it is an ever changing environment with the potential for an ever changing workforce. **If you are ever unsure of how to keep safe on a construction site you should speak with your supervisor.**

Personal Protective Equipment

Personal Protective Equipment (PPE) is always the last resort when implementing a safe system of work for a particular task. Common forms of PPE include protective boots, hard hats, gloves, safety glasses, knee pads and high visibility vests.

ENVIRONMENTAL PROTECTION: CONSTRUCTION AND MAINTENANCE WORKS

Some of the aspects of environment taken into account: Waste, Biodiversity, Emissions to Air and Discharges to Water

- To comply with environmental regulation and for preventing air, land water pollution
- Some of the measures taken:
  - **Site drainage**
  - No disposal of any other liquid wastes or wastewater of any kind in surface water drains used for rain water
  - All precautions taken to avoid any pollution to surface water bodies or groundwater

ENVIRONMENTAL PROTECTION: CONSTRUCTION AND MAINTENANCE WORKS

- **Pollutants from Site**
- Silt deposition (dangerous for aquatic life - to avoid discharge in water, treatment options chosen)
- Concrete and cement – batching plant away from a watercourse, washing of cement/concrete lorries to be done in contained area and washing water must not be runoff without treatment in surface water
- Oil & fuel (store away from water bodies, avoid spillage by protection from damage by anyone or by running cars etc., secure storage on an impervious base)
- Herbicides (no use of herbicide near water bodies)
- Detergents (from pressure washers not to be discharged in surface water drains)
- Cooling & heating systems (anti-freeze, corrosion inhibitor etc. to be avoided discharge in surface water)
- Paints & Varnishes – as well as glues, bituminous substances, cleaning agents, spirits, brushes etc. (not to be discharged in surface water and any unused left over paint, varnishes may be disposed off as hazardous waste

ENVIRONMENTAL PROTECTION: CONSTRUCTION AND MAINTENANCE WORKS

- **Security:** Vandalism & theft often become causes of pollution so lockable items must be stored securely
- **Vehicles carrying liquids** should be properly monitored
- **Deliveries of materials** especially while hazardous materials are being delivered, should be supervised and all precautions to be taken to avoid any overflow or spillage in any other way
- **Waste storage and disposal** using hierarchy of reduce, reuse, recycle, energy recovery and as a last resort, landfill according to environmental regulation requirements
- **Conservation of biodiversity** i.e. protection of trees, ponds, streams and other wildlife features from machinery, chemical contamination, material stacks etc.
- **Nuisance** to individuals or general public must be avoided like dust, smell, rubbish etc.
- **Emissions to air** like dust, smoke from generators, release of greenhouse gases to be carefully managed.