



نظام الشارقة للسلامة والصحة المهنية
Occupational Safety & Health Sharjah

حكومة الشارقة
هيئة الوقاية والسلامة
Government of Sharjah
Prevention And Safety Authority



Code of Practice

OSH Management in Construction

OSHJ-CoP-02

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1 Introduction

The construction industry covers a wide range of activities with many significant hazards associated with plant, equipment, materials, the tasks and the workplace itself. In addition, employment patterns and contractual arrangements further increase the inherent difficulties in managing safety and health in construction.

Construction projects, especially large projects, are complex and dynamic workplaces. Multiple contractors may work on one site simultaneously, with the mix of contractors changing with the phases of the project. The nature of construction work identifies specific issues, including but not limited to:

- The transitory nature of employees;
- Temporary nature of construction activities and the constantly changing workplace and work environment;
- Fire arrangements;
- Time pressures from clients;
- Weather and extreme climatic conditions;
- Levels of numeracy and literacy of employees;
- Communicating with employees with different languages.

With real time pressures on a project and teams of people who may not have worked together before, can lead to difficulties in the management of safety and health. As a result, and because of the nature of construction activities, there is a greater need for effective safety and health management on site.

2 Purpose and Scope

This Code of Practice (CoP) has been developed to provide information to entities to assist them in complying with the requirements of the Occupational Safety and Health System in Sharjah.

This Code of Practice (CoP) defines the minimum acceptable requirements of the Occupational Safety and Health System in Sharjah, and entities can apply practices higher than, but not lower than those mentioned in this document, as they demonstrate the lowest acceptable level of compliance in the Emirate of Sharjah.

3 Definitions and Abbreviations

Entities: Government Entities: Government departments, authorities or establishments and the like in the Emirate.

Private Entities: Establishments, companies, enterprises and economic activities operating in the Emirate in general.

Risk: Is the combination of likelihood of the hazard causing the loss and the severity of that loss (consequences).

Risk Assessment: The systematic identification of workplace hazards and evaluation of the risks associated. This process takes existing

	control measures into account and identifies and recommends further control measures where required.
Competence:	The combination of training, skills, experience and knowledge that a person has and their ability to apply all of them to perform their work.
Safe System of Work:	A formal procedure that results from systematic analysing of a task in order to identify all the hazards. It defines safe methods to ensure that hazards are eliminated or risks reduced.
Construction:	Building, including excavation and the construction, structural alteration, renovation, repair, maintenance (including cleaning and painting) and demolition of all types of buildings or structures. Civil engineering, including excavation and the construction, structural alteration, repair, maintenance and demolition of, for example, airports, docks, harbours, inland waterways, dams, river and avalanche and sea defence works, roads and highways, railways, bridges, tunnels, viaducts and works related to the provision of services such as communications, drainage, sewerage, water and energy supplies. The erection and dismantling of prefabricated buildings and structures, as well as the manufacturing of prefabricated elements on the construction site.
Structure:	Any building, any masonry, timber, metal or reinforced concrete structure, railway line or siding, dock, harbour, inland navigation, tunnel, shaft, bridge, viaduct, waterworks, reservoir, pipe or pipe-line, cable, aqueduct, sewer, sewage works, gasholder, road, airfield, sea defence works, drainage works, earthworks, lagoon, dam, wall, caisson, mast, tower, pylon, underground tank, earth retaining structure or structure designed to preserve or alter any natural feature, fixed plant and any structure similar to the foregoing. Any formwork, falsework, scaffold or other structure that provides temporary support or access.
Excavation:	Excavation means a hole in the earth or face of the earth formed by removing sand, soil, rock or other material.
Client:	The entity or individual commissioning and funding the project, directly or indirectly.
Consultant:	Appointed by the client to plan, manage and monitor a project on their behalf.
Principal Contractor:	A principal contractor is the contractor with control over the construction project involving more than one contractor. They are appointed in writing by the client to plan, manage, monitor and coordinate safety and health during construction.
Contractor:	Every natural or legal person or an entity entrusted by an entity to accomplish specific work or perform a task or any other activity.

Sub-Contractor: A person or firm that undertakes a contract with a contractor to provide some portion of the work or services on a project which the contractor has agreed to perform.

OSH: Occupational safety and health.

4 Roles and Responsibilities

4.1 Client Responsibilities

- Appoint a consultant who has the necessary skill, knowledge and competence to undertake the project;
- Make suitable arrangements for managing the project;
- Ensure that the arrangements are maintained and reviewed throughout the project;
- Ensure that the principal contractor's OSH systems are appropriate for the scope of the project;
- Ensure that the safety and health plan for the project is developed by the consultant/principal contractor and in place and reviewed throughout the project;
- Ensure that all the relevant licenses, permits and non-objection certificates for the project are obtained from the relevant authorities;
- Appoint a principal contractor to manage the project to ensure that construction is planned, organised, controlled, monitored and reviewed;
- Ensure consultant, principal contractors and others appointed are competent and adequately resourced to carry out OSH and other responsibilities;
- Ensure arrangements are made for the project work to be carried out safely without risk to health;
- Provide the relevant information to the principal contractor for carrying out their OSH responsibilities at different stages of the project;
- Ensure the contractual relationships within the project are clear and responsibilities on safety and health are clearly allocated;
- Request OSH details from the consultant and principal contractor of the arrangements they propose to implement throughout the project;
- Where the client appoints or mandates OSH responsibilities to a project manager or principal contractor, the client is ultimately accountable for the OSH project requirements.

4.2 Consultant Responsibilities

- Ensure they are competent with the adequate resources to address the safety and health issues likely to be involved in the design;
- Check that the client is aware of their responsibilities;
- Plan, manage, monitor and coordinate the pre-construction stage;

- Assist the client in preparing pre-construction information;
- Assess the design and ensure that, where reasonably practicable, foreseeable risks to those involved in the construction and future use of the structure are avoided;
- Ensure risk from the hazards which can reasonably be identified through design work are eliminated or controlled;
- Provide adequate information about any significant hazards associated with the design and pass information to contractors and others so that they can be made aware of the risks;
- Prepare the safety and health plan which shall contain information relating to the project which is likely to be needed during any subsequent construction work, such as the significant residual risks, to ensure the safety and health of any person;
- Ensure cooperation and coordination with others involved in the project in order to improve the way in which risks are managed and controlled.

4.3 Principal Contractor Responsibilities

- Plan, manage and monitor construction work in liaison with all contractors involved in the project;
- Undertake risk assessments of the activities and major hazards associated with the project;
- Prepare, implement and maintain the risk register that incorporates all known hazards and risks from the project;
- Ensure that contractors` and sub-contractors` risk assessments are appropriate to the nature of the work;
- Prepare, develop and implement a written construction safety and health plan and site rules;
- Establish common arrangements, ensuring welfare facilities, emergency procedures and security are in place from the start of the project and are adequately maintained;
- Provide adequate information about any significant hazards associated with the project to contractors and others so that they can be made aware of the risks;
- Ensure contractors and sub-contractors have the necessary skills, knowledge, experience, competence and that the entity has sufficient capability;
- Ensure cooperation between contractors;
- Notify SPSA of the project;
- Ensure employees have site inductions and the necessary competency to conduct work activities;
- Ensure that all the reported incidents are investigated;
- Consult with employees and establish how the views of employees on safety and health issues associated with the project will be co-ordinated;

- Liaise with the consultant for ongoing design changes;
- Prevent unauthorised access and secure the site by implementing necessary measures;
- Ensure that necessary controls are in place to protect the public from injury or illness from the work activities at or near the workplace.

4.4 Contractor and Sub-Contractor Responsibilities

- Plan, manage and monitor their own work and that of their employees on-site;
- Undertake risk assessments of the activities and foreseeable hazards for areas they are responsible for;
- Employ competent and skilled employees;
- Ensure that the employees are site inducted before they start the work;
- Ensure obligation to site OSH rules of the project and co-operate and co-ordinate their work with others involved in the project;
- Obtain specialist advice when planning high risk work;
- Provide information to employees and consult with the workforce;
- Ensure that employees have the necessary skills, knowledge, training and experience for the work activities;
- Provide information, instruction, supervision and training to their own employees;
- Ensure adequate welfare provisions are in place at the commencement of their work.

4.5 Employee Responsibilities

- Not endanger themselves or others;
- Follow precautionary control measures to ensure work activities associated with construction are performed safely and without risk to health;
- Cooperate with the entity and receive safety information, instruction, supervision and training;
- Report any activity or defect relating to construction work which they know is likely to endanger the safety of themselves or that of any other person.

5 Requirements

Due to the risks associated with construction, the management of risk is imperative. This can only be achieved through effective communication, robust controls and co-ordination at all levels.

Cooperation between parties and coordination of the work are key to the successful management of construction safety and health. Cooperation and coordination can only be meaningful if the relevant members of the project team have been appointed early enough to allow them to contribute to risk reduction. This is particularly important during the design stage

where clients, consultants and contractors should contribute to discussions on building safety issues, usability and maintainability of the finished structure.

Clients should seek to appoint those who can assist with design considerations at the earliest opportunity so that they can make a full contribution to risk reduction during the planning stages.

5.1 The Safety and Health Plan

The safety and health plan is the main document for the management of safety and health on site and should be prepared before construction work starts. It is a live and dynamic document that will change and grow during the project and should be reviewed and updated on a regular basis. The safety and health plan shall be prepared and maintained by the principal contractor, in consultation with all the stakeholders of the project.

The information contained in the safety and health plan should address the following, including but not limited to:

- Description of the project, including key dates and timescales, and details of personnel involved;
- Risk assessments;
- Legal requirements and other requirements;
- OSH objectives and targets;
- Roles and responsibilities of key project personnel;
- Training requirements to ensure the competency of personnel;
- Client considerations and management requirements to implement communication, participation and consultation processes;
- Occupational safety, health and welfare requirements;
- Operational control, including:
 - Risk assessment;
 - Safety method statements;
 - Permit to work;
 - Site rules;
 - Temporary works;
 - Personal protective equipment;
 - Working at height, hot work, confined spaces, excavation, electrical safety;
 - Safe selection and use of lifting equipment;
 - Traffic management;
 - Tools and equipment;

- Compressed air;
- Hazardous substances.
- Waste management;
- Emergency preparedness and response;
- OSH performance measurement and monitoring;
- Incident reporting and investigation;
- Non-conformance, corrective and preventative action;
- Audit.

5.2 The Safety and Health File

The safety and health file provides information needed during future work, which includes cleaning, maintenance, alterations, refurbishment and demolition, it alerts an entity to the risks and helps them to decide how to work safely.

The safety and health file shall be prepared and maintained by the principal contractor and submitted to the client upon completion and handover of the project. When preparing the safety and health file the following should be considered, including but not limited to:

- Brief description of the work carried out, with design drawing and records attached;
- Any hazards that have not been eliminated through design and construction, and how they have been addressed;
- Structural design principles and safe working loads for floors and roof;
- Construction methods and materials, details of hazardous materials if used;
- Information on removal or dismantling of installed plant or equipment;
- Safety and health information about work equipment - its use, inspection and maintenance;
- Services and utilities in the location;
- Any other relevant documentation to support the safety and health file.

5.3 Risk Assessment

Any entity conducting construction work activities shall conduct risk assessments to assess the risks associated with construction work and take all reasonably practicable precautions to ensure the safety of employees and others who could be affected.

The risk assessment shall take into consideration the following factors, including but not limited to:

- The size, location and complexity of the project;
- Access and egress to and from site;
- The number of people working onsite;

- The type of work activities, work demands and shift patterns;
- The type of vehicles, machinery and equipment used;
- The type of maintenance activities;
- The type of hazardous substances and materials used;
- Simultaneous activities;
- Information, instruction, supervision and training required for employees to work safely;
- Provision of personal protective equipment;
- Emergency procedures and response.

Further information on risk assessment can be found in OSHJ-CoP-01: Risk Management and Control.

5.4 Safety Method Statements

The safety method statement describes, in a logical sequence, exactly how a job is to be carried out in a safe manner and without risks to safety and health and includes all the control measures. This will allow critical work activities to be adequately planned and resourced with the appropriate safety and health resources needed for it.

A safety method statement draws together the information compiled about the various hazards and the ways in which they are to be controlled from the conclusions of the risk assessments.

Safety method statements are required to be prepared and by the entity performing the following critical work activities, including but not limited to:

- Demolition, dismantling and structural alteration work;
- The use of explosives;
- Working on or near an exposed electrical installation;
- Working on, over or adjacent to a road;
- Confined space work;
- Asbestos removal;
- Using hazardous substances;
- Using powered mobile plant;
- Working at height;
- Safe selection and use of lifting equipment;
- Other work activities where the work is identified to be hazardous.

The safety method statement can also provide information for other contractors working at the site about any effects the work will have on them and help the principal contractor to develop the overall safety and health plan for the construction phase of a project.

The safety method statement is an effective way of providing information to employees about how they expect the work to be carried out and the precautions that should be taken. Checking that the working methods set out in the statement are put into practice on site can be a useful monitoring tool.

5.5 Permit to Work

The principal contractor is responsible for developing a site/project specific permit to work system and ensure all contractors and others involved in the project are aware and adhere to the developed permit to work system.

A permit to work system is a formal recorded process used to control work which is identified as potentially hazardous.

The permit to work consists of a document that includes, but is not limited to:

- Details the work to be conducted;
- States that all foreseeable hazards have been noted;
- States the control measures to be implemented;
- States the persons authorised to undertake the work.

A permit to work system must be in place to control work which is identified as potentially hazardous.

Further information on permit to work can be found in OSHJ-GL-16: Permit to Work.

5.6 Site Management and Supervision

The client shall ensure that the principal contractor is providing effective management of work activities and that competent site supervision is in place to maintain a safe and healthy site. The greater the risk, the greater the degree of control and supervision required. Site managers and supervisors should be trained to help the client discharge their safety and health responsibilities. The principal contractor shall ensure the following, including but not limited to.

- When employees, contractors or visitors first come to site they shall receive site induction training;
- When employees, contractors or visitors shall receive information about the site hazards and the steps that have been taken to control the risks;
- Safety and health information shall be displayed on a notice board prominently placed near the site entrance;
- The principal contractor shall take steps to ensure that only authorised people are allowed in areas where construction work is being conducted;
- Safety and health inspections shall be undertaken on a regular basis and cover locations, activities, specific jobs and other areas identified as high risk.

- The principal contractor shall ensure a robust process for site management, including supervision, is developed, implemented and monitored.

The principal contractor shall ensure that work activities are regularly checked to make sure that what should be happening onsite is actually carried out in practice and that people are fulfilling their OSH responsibilities. Site supervisors need to ensure their safety and health responsibilities are fulfilled as an essential part of the construction work.

Further information on monitoring and review can be found in OSHJ-GL-20: Measuring OSH Performance.

5.7 Site Rules

The principal contractor shall ensure that site rules are developed, communicated, implemented and monitored during the time of the project. The rules shall be developed in Arabic, English and other relevant languages, and in a format understood by the different persons working on site.

The site rules shall consider the following, including but not limited to:

- Safe access to, from and around the site;
- Emergency arrangements;
- First aid arrangements;
- Personal protective equipment requirements;
- Use of mobile phones;
- Smoking;
- Site housekeeping;
- Food and rest areas;
- Restricted areas;
- Hot works;
- Traffic management systems;
- Pedestrian routes;
- Visitors access arrangements;
- Permit-to-work systems;
- Other site specific arrangements.

5.8 Site Induction

The client shall ensure that the principal contractor provides a suitable site induction to everyone working on site. The induction should be site specific and highlight any particular risks and control measures that those working on the project need to know, including but not limited to:

- Outline of the project;

- Management of the project;
- Emergency and first aid arrangements;
- Site rules;
- Incident and hazard reporting arrangements;
- Arrangements for briefing employees on an ongoing basis;
- Arrangements for consulting the workforce on safety and health matters;
- Individual employee responsibilities for safety and health.

Site inductions should also be provided to those who do not regularly work on the site, but who visit it on an occasional or once only basis. The inductions should be proportionate to the nature of the visit.

5.9 Securing the Construction Site

The client shall ensure that the principal contractor secures the construction site, which shall be fenced off with adequate barriers and suitably signed, to prevent access from unauthorised personnel and members of the public. These measures will protect them from construction site hazards. There shall be a system in place to ensure necessary precautions are kept in place during working hours and that night-time and weekend as required.

Factors to consider when securing the construction site, include but not limited to:

- Perimeter fencing;
- Signage;
- Means of securing hazardous materials;
- Barrier off or cover over excavations or pits;
- Isolating and immobilising vehicles and plant;
- Storage and securing of building materials;
- Remove access ladders from excavations and scaffolding.

Determine the site perimeter within which the construction work will be carried out and determine what hazards may affect the public outside the perimeter.

Factors to consider, include but not limited to:

- The nature and type of the construction work;
- The population of the surrounding area;
- Who will need to visit the site during the work;
- Whether the site may attract children;
- Site characteristics.

This will help to decide on the type of perimeter required, and its exact location. The perimeter then needs to be provided, possibly by utilising existing permanent features such as walls, and maintained. Where existing features cannot be used, a suitable perimeter fence will need to be constructed.

5.10 Protecting the Public when Working in Public Places

The client shall ensure that the principal contractor implements adequate measures to protect the public when working in public places. Road traffic may also present risks to the people working on site.

During some work activities the pavement will have to be closed to protect the public. The area will need to be barricaded and a safe alternative route provided for members of the public.

Further information on working on roads or pavements can be found in OSHJ-GL-18: Working on Over or Adjacent to Roads.

5.11 Demolition, Dismantling and Structural Alteration

Demolition, dismantling and structural alteration are high risk activities whose safe execution is complex and technical and where expertise is vital. They require careful planning and execution by contractors who are competent in the full range of demolition techniques. The contractors demolition/dismantling plan shall be reviewed and approved by the relevant authority.

The process for planning a safe and effective demolition/dismantling includes:

- A pre-demolition survey including:
 - Structural surveys to determine structural hazards;
 - Hazardous substance surveys to determine site specific hazards, such as the use of hazardous construction materials, storage of hazardous materials on site, and contaminated land;
 - Site/environmental surveys to determine all other site specific issues.
- The fundamental principles of all demolition work and the range of specific techniques available;
- The development of a demolition/ dismantling plan;
- The preventive and protective measures used to safeguard the workforce and others.

The demolition or dismantling of any structure must be planned and carried out in such a way as to prevent risk or reduce the risk so far as it is reasonably practicable to do so.

Demolition or dismantling must not be carried out unless the arrangements for ensuring that it is carried out in a safe manner have first been recorded in writing. The demolition or dismantling of any structure must be planned and carried out as safely as possible, under the supervision of a competent person. Reports such as an asbestos survey, information on underground services and structural surveys will usually be required to assist with the planning and execution.

The demolition/dismantling plan shall consider the following factors, including but not limited to:

- The site location;
- Description of buildings/structures and their structural support;
- Location of services, hazardous substances, underground structures and adjoining retaining structures;
- Description of the methodology to be used;
- Equipment to be used and the movement of equipment onsite;
- Description of methods for the collection, segregation, handling, recycling and disposal of waste materials, including hazardous substances;
- The proposed sequence of conducting the work and the timeframes estimated for each stage;
- Risk assessments;
- Control measures to be implemented;
- Location, extent and type of exclusion zones and other control measures;
- Traffic management plan;
- Any other documents required to support the demolition/decommissioning plan.

Explosives used for demolition must be stored, transported and used safely and securely. Explosives shall only be used when steps have been taken to ensure risks are controlled to an acceptable level from the explosion itself and/or ejected materials.

5.12 Reporting of Incidents

The client shall ensure the principal contractor has implemented an internal system for employees to report all OSH incidents. Incidents can be reported in a variety of ways, a simple form, an email or incident reporting box. Regardless of what system the entity decides to use, employees should be encouraged to report hazards, near misses, incidents, dangerous occurrences, occupational disease and injuries, the principal contractor shall ensure the system is used and checked regularly.

The principal contractor shall ensure employees receive training on what must be reported, how they should report and what the entity will do with the information they receive. The employees will feel valued if they see the entity taking actions on their reporting, regular feedback to employees is a good way to demonstrate the entities commitment to safety and health.

The entity shall record internally:

- All incidents, injuries, occupational disease or dangerous occurrences;

- All occupational incidents causing injuries that result in employees being off work or incapacitated for more than three consecutive days, not counting the day of the incident but including any weekends, public holidays or other rest days.

Records of incidents are important, they ensure that entities collect sufficient information to properly manage safety and health risks. This information is a valuable management tool that can be used as an aid to risk assessment, helping to develop solutions for potential risks. Using records in this way can help to prevent injuries and ill-health and control costs from incident loss.

The principal contractor shall undertake internal investigations of all incidents and identify root causes to assist in the prevention of reoccurrence. The client shall review all incident investigations and ensure the principal contractor has taken appropriate action to implemented additional control measures to prevent reoccurrence.

Where contractors are involved, it is the responsibility of the principal contractor to report the incidents on behalf of sub-contractors. This is to ensure that there is clear reporting line and avoid any duplication in reporting to the SPSA.

The principal contractor shall follow the SPSA reporting procedure described in OSHJ-CoP-17: Incident Reporting and Investigation.

5.13 Personal Protective Equipment

The client shall ensure that the principal contractor provides adequate personal protective equipment to their employees. The principal contractor shall also ensure that all contractors working onsite provide adequate personal protective equipment to their employees.

The minimum requirements include:

- Safety shoes – Shoes with anti-slip soles prevent slipping, while steel capped boots protect from impact and crush hazards;
- Safety helmets – Provide head protection from dropped objects which cannot be adequately controlled;
- High visibility jackets – High visibility vests to be worn by employees working on construction sites.

Other specific personal protective equipment, depending on the work activities, including but not limited to:

- Eye protection – Safety glasses and goggles prevent debris harming the eyes;
- Hand protection – Gloves for different uses necessary to protect the hands;
- Body protection – Overalls, aprons and chemical suits to protect the body;
- Hearing protection – Ear defenders or plugs help reduce noise exposure to an acceptable amount;
- Personal fall protection systems – Comprising of fall restraint/prevention or fall arrest systems;
- Any other personal protective equipment identified as being required in the risk assessment.

Further information on personal protective equipment can be found in OSHJ-GL-07: Personal Protective Equipment.

6 Training

The principal contractor shall ensure every employee receives induction training in languages and in a format that employees understand, prior to being allowed onto project sites to perform work activities.

Construction activities comes with diverse OSH requirements and challenges, which require specific specialised training to ensure employees competence. The employees training shall contain the following, including but not limited to:

- Operators of work equipment and vehicles, should be adequately trained in the hazards of the equipment they use, and the precautions that they shall take to ensure safe operation;
- Specific information, instruction, supervision and training on the safe selection, use and storage of work equipment and the risks associated with using the equipment and the control measures to be implemented to reduce these risks;
- Specific information, instruction, supervision and training for the employees who are working at height;
- Specific site rules and safety requirements;
- Personal protective equipment requirements;
- Fire and emergency response procedures, including the use of first aid and firefighting equipment.

Periodic refresher training shall be conducted to ensure employees competency is maintained, including but not limited to:

- Where training certification has expired;
- Where identified as part of a training needs analysis;
- Where risk assessment findings identify training as a measure to control risks;
- Where there is a change in legal requirements;
- Where incident investigation findings recommend refresher training.

The entity must record and maintain accurate training records of OSH training for employees.

Further information on training can be found in OSHJ-GL-26: Training and Competence.

7 Emergency Preparedness and Response

Construction sites can be dangerous places and should have an emergency plan so that quick and effective action can be taken in the event of an emergency to ease the severity of the situation and to limit the consequences. An emergency plan comprises of agreed, recorded and rehearsed strategies, enabling those on site to respond effectively and reliably.

When planning emergency procedures the following factors shall be considered, including but not limited to:

- The type of work being conducted on site;
- The characteristics and size of the site and the number and location of workplaces on the site;
- The plant and equipment being used;
- The number of people likely to be present on the site at any one time;
- The physical and chemical properties of substances or materials on or likely to be on the site.

The emergency plan shall consider the following, including but not limited to:

- Everyone on site, including contractors, can be alerted in an emergency and know what signal will be given if there is an emergency and know what to do;
- Emergency routes are available, kept clear, signed and adequately lit;
- There is adequate access to and around the site for the emergency services and that access routes remain clear at all times;
- Appointing emergency response personnel who can take charge and make decisions on behalf of the entity during an emergency and liaise with emergency services.
- Adequate fire fighting and first aid equipment is available for the size of the operation and takes into consideration the types of hazardous goods stored;
- Employees are trained in emergency response, including information of first aid arrangements and where first-aiders, first aid equipment and facilities are located;
- First-aiders are appointed and available at each location and on each working shift.

Further information on emergency preparedness and response can be found in OSHJ-CoP-18: Emergency Preparedness and Response.

7.1 Fire

There shall be adequate and appropriate equipment, facilities and personnel available to respond to fire emergencies. The following factors should be considered, including but not limited to:

- A means of giving warning to alert people on site of a fire, this could be a temporary or permanent fire alarm or manually operated signal, depending on the size and complexity of the site. Any warning needs to be distinctive, audible above other noise and recognisable by everyone;
- Plan escape routes and ensure they remain available and clear of obstructions. For work areas above or below ground, provide alternative routes to ground level where possible;
- Protect routes by installing permanent fire separation and fire doors as soon as possible. Escape routes must give access to a safe place where people can assemble and be accounted for;
- Signs shall be provided to indicate escape routes. Ensure that adequate lighting is provided for enclosed escape routes, additional emergency lighting may be required;

- Fire extinguishers should be located at identified fire points around the site, as well as providing additional fire extinguishers for hot work. The fire extinguishers shall be appropriate to the risk of the potential fire;
- Nominated people should be trained in how to use fire extinguishers;
- If the building being worked in is occupied, ensure the work does not interfere with the escape routes from the building, or any fire separation, alarms, dry risers, or sprinkler systems;
- Fire doors should never be locked, left open or removed;
- Keep existing wet and dry risers ready for use and install any new ones as soon as possible.

7.2 First Aid

There shall be adequate and appropriate equipment, facilities and personnel to provide first aid to employees if they are injured or become ill at work. A first-aider is someone who has undergone a training course in administering first aid and holds a current first aid certificate. The number of qualified first-aiders needed depends on the risk of injury and ill health on site. The minimum provision for all sites includes, but is not limited to:

- A first aid box with enough equipment to cope with the number of persons on site;
- An appointed person to take charge of first aid arrangements in each working shift;
- Information to employees on the name and location of first-aiders;
- An appointed person is someone who will take charge when someone is injured or falls ill and who will telephone for an ambulance if one is required. An appointed person should not attempt to give first aid for which they have not been trained;
- The first aid arrangements should cover shift working, night and weekend working where this is carried out.

Further information of first aid can be found in OSHJ-CoP-16: First Aid at Work.

8 References

OSHJ-CoP-01: Risk Management and Control

OSHJ-CoP-16: First Aid at Work

OSHJ-CoP-17: Incident Reporting and Investigation

OSHJ-CoP-18: Emergency Preparedness and Response

OSHJ-GL-07: Personal Protective Equipment

OSHJ-GL-16: Permit to Work

OSHJ-GL-18: Working on Over or Adjacent to Roads

OSHJ-GL-20: Measuring OSH Performance

OSHJ-GL-26: Training and Competence

9 Document Amendment Record

TITLE	OSH Management in Construction		
DOCUMENT AMENDMENT RECORD			
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