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**PROJECT HSE PLAN**

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### List of Abbreviation

|  |  |
| --- | --- |
| SHEQ | Integration of Safety, Health, Environment and Quality |
| HSE | Environment Health and Safety |
| BBS | Behavior Based Safety System |
| OHSMS | Occupational Health and Safety Management System |
| OHS | Occupational Health and Safety |
| HSEMS | Environmental, Health and safety Management System |
| SC | Subcontractor |
| EMP | Emergency Management Plan |
| SWMS | Safe Work Method Statement |
| RA | Risk Assessment |
| MSDS | Material Safety Data Sheet |
| COSHH | Control of substance hazardous to health |
| HCS | Hazardous Chemical Substance |
| PPE | Personal Protective Equipment |
| VDU | Video Display Unit |
| AED | Automated External Defibrillator |
| PTW | Permit to Work |
| MEP | Mechanical, Electrical and Plumbing |
| ISO | International Organization for Standardization |
| KPI | Key Performance Indicator |
| LTI | Lost Time Incident |
| QA | Quality Assurance |
| ALARP | As low as reasonably practicable |

## Approval of Project HSE Plan

This Project Health, Safety and Environmental Management Plan has been developed by <company name here> for the following Project:

The Project HSE Plan is designed to confirm to the main requirements of ISO 45001:2018, Occupational Health and Safety Management System and 14001:2015 Environmental Management Systems.

The Project HSE Plan is also designed in compliance with local laws and legislation

|  |  |  |
| --- | --- | --- |
|  |  | Date |
|  |  | Date |
|  | | |
|  |  | Date |

## Introduction

##### Purpose

The purpose of this Health, Safety Environmental Management plan is to outline the management system requirements and procedures which must be adopted for the Write Project Name Here (from hereafter referred to as ‘the project’), to ensure that the management and administration of the construction process provided by <COMPANY NAME HERE> complies with employer’s specified requirements. This plan details the management and control measures which will be implemented to manage potential Health, Safety and Environmental impacts associated with the activities for the project. The Project HSE Plan presents actions, responsibilities, protocol, conformance, verification and containment activities to be undertaken by project staff and contractors at all times during the construction phase of the project.

This plan forms a part of <COMPANY NAME HERE> Management Systems which is certified to ISO 9001:2008 - Quality Management System, ISO 14001:2015 - Environmental Management System, OHSAS 18001:2007 - Occupational Health and Safety Management System. The implementation of the plan will be monitored, evaluated for currency and any changes made communicated to all relevant personnel.

##### Scope of this Plan

This plan applies to the works associated with the Project and includes a description of:

* + - Health, Safety and Environmental management framework;
    - Project HSE objectives and targets
    - The project organisational structure and roles and responsibilities for HSE on the project;
    - An overview of the HSE management procedures and safe work practices;
    - Project health and safety high risk activities associated with the works.

##### Scope of the Project

The scope of project work involves:

##### Write Scope of project here

##### Application of this Plan

The Project HSE Plan applies to all parties and groups involved in the design, implementation and undertaking of activities at the Write Project Name Here.

<COMPANY NAME HERE> is responsible for ensuring that the requirements of this HSE Plan are adhered to by its entire staff and all subcontractors.

##### Precedence

Where ambiguity is detected between the procedures and requirements in this plan and the <COMPANY NAME HERE> Management procedures, then the procedure and strategies mentioned in this plan will take precedence.

##### Interface with other Operational Procedures and Project Plans

This Health, Safety and Environmental Management Plan should be read in conjunction with the <COMPANY NAME HERE> Management Standards, Operational Procedures, and Safe Work Practices including the Emergency Management Plan.

The Operational Procedures are confidential documents and, as such, are not issued outside of <COMPANY NAME HERE>. However, they will be made available, on the Project, for the purpose of surveillance and audit of the Health and Safety Management System.

##### Project Description and Location

##### Enter description and location

## Document Control

##### Controlled Copies

Amendments to this HSE Plan are reviewed by the QHSE Manager and distributed to all holders of controlled copies. As a minimum <COMPANY NAME HERE> will review and update the Project HSE Plan at least annually.

##### Uncontrolled copies

Uncontrolled copies of this Project HSE Plan may be distributed to <COMPANY NAME HERE> personnel, external organizations and authorities. These copies are not subject to automatic amendment (unless noted on the distribution register) and currency of the document should be verified by the receiver.

##### External Audits

<COMPANY NAME HERE> shall make available project staff and files as required from time to time for the purposes of external audits of any projects, by request and approval of the QHSE Manager.

Guides shall be provided for the external auditors to access the <COMPANY NAME HERE> HSE Management System documentation, by arrangement and approval.

##### Amendments Register

The Project HSE Plan is a live document and will be reviewed and updated where necessary to reflect changes introduced by the project team, site specific outcomes, legal requirement, non-conformances and recommendations arising out of inspections, meetings and audits.

The amendment register of the Project HSE Plan is not permitted for modification unless prior approval has been granted from the Corporate HSE Manager of <COMPANY NAME HERE> The preparation, responsibility and approval of the amendment must be applied and shall be done by authorized <COMPANY NAME HERE> personnel.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Health, Safety and Environmental Management Plan Register of Amendments** | | | | | | |
| Section No: | Page No: | Amendment / Revision No: | Date of Issue: | Prepared By: | Approved By: | Description of Amendments |
| All | All | Rev 01 |  |  |  | Over all reviewed |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

##### Distribution Register

The issuance and distribution of this Project Health, Safety and Environmental Management Plan is controlled and monitored by the QHSE Manager.

|  |  |  |  |
| --- | --- | --- | --- |
| **HSE PLAN DISTRIBUTION REGISTER** | | | |
| Uncontrolled Copy Ref. No: | Date of Issue | Name of Recipient | Position / Organisation |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |

##### Document and Records Management D o c u m e n t a t i o n

<COMPANY NAME HERE> has developed a system to establish and maintain a uniform system of document management and record keeping. Project documentation is controlled in accordance with Document Control Procedure, the document and records management operational procedure, project document protocol which defines the controls to ensure:

* + - Document remain legible, traceable and secure
    - To ensure that only approved and updated documents are available at the point of use, and to guard against inadvertent use of obsolete documents.
    - Relevant version control to prevent unintended use of obsolete documents
    - Appropriate review and approval process
    - A distribution process for HSE documents
    - The documentation is periodically reviewed, revised as necessary and approved for adequacy prior to distribution.
    - The documentation is current, readily identifiable and available at all points of use
    - The staff are immediately notified of any changes in the documentation such as, the development or receipt of new documentation and any amendments to the current documentation;
    - The documentation of external origin is registered and regularly reviewed for currency; and
    - The obsolete documents are appropriately identified and archived.

##### R e c o r d C o n t r o l

A record management system is established and maintained that is capable of storing records necessary to provide adherence to the Standard and Client requirements, including identification, storage, protection, retrieval and disposition.

Controlled copies of all records are available to all <COMPANY NAME HERE> staff on the intranet. It is the responsibility of the Project Director to ensure that all required records are completed in a timely and comprehensive manner and that they are kept in a manner that ensures they are legible, identifiable, traceable and readily accessible.

##### R e c o r d R e t e n t i o n

The record retention procedure(s) shall address, at a minimum:

* + - Process to maintain HSE records as necessary to demonstrate conformity to the requirements of OHSAS 18001 and legal requirement
    - Process to ensure identification, storage, protection, retrieval, retention and disposal of records;
    - Process to retain HSE documents and records for a minimum period of 5 years;
    - Process to retain medical/occupational health records for a minimum period of employment plus 30 years thereafter.

## Environmental Health And Safety Management System Framework

The <COMPANY NAME HERE>HSE management system is hierarchical, where documents and systems meet and support the requirements of those at higher levels. The outline below details the structure of the management system applicable to the project:

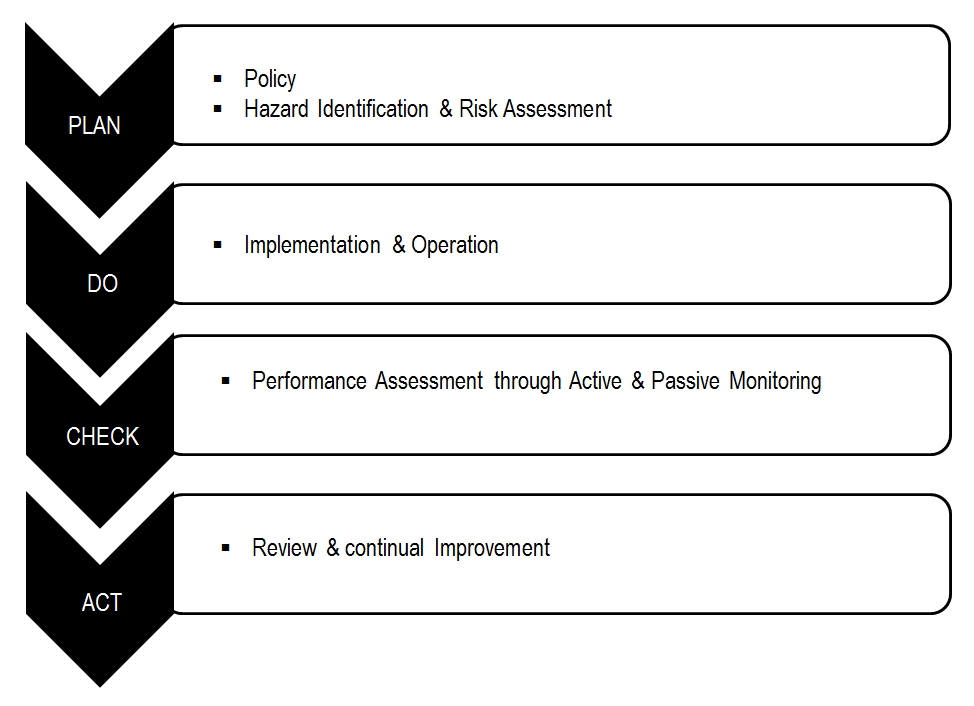
##### Level 1 – Strategic Objectives / Policies

The strategic objectives support our commitment to sustainable growth to ensure our business remains viable and continues to create value for our employees, suppliers, sub-contractors and partners. Our bottom line performance is dependent on identifying opportunities and managing our resources to operate efficiently and grow.

The policy statements have been developed by Management and are a statement of the company’s objectives and commitment to environment, health, safety and quality management. The policies are communicated to all employees during induction, implemented and maintained at all levels of the organisation and continually reviewed for their ongoing suitability.

##### Level 2 – Management Standards

Management Standards have been developed to define the company's expectations and minimum performance requirements for managing projects. The framework for the standards is based on the continual improvement model of plan do check act.



Management standard covers all operational aspects and activities that have the potential to affect our performance

They include:

* Commitment, responsibility and accountability
* Objectives and targets
* Legal Requirements Risk Management
* Management of contractors
* Emergency Management
* Standard Operating Procedures
* Management Of Change
* Training
* Competency
* Hazard, Near Miss, Accident Reporting and Investigation
* Communication and Consultation
* Inspection
* Audit
* HSE Performance Monitoring
* Document Control and Document retention
* Management Review
* Financial and Commercial
* Design, Construction, Commissioning
* Environmental Management

##### Level 3 – Operational Procedure

Operational Procedures have been developed to provide detailed instructions on all disciplines.

##### Level 4 – Project Management Plans

Management plans have been developed to satisfy specific contract requirements. The management system will be implemented within the framework of the project management plan, which overlays the suite of management plans.

##### Level 5 – Management Action Plans / Risk Assessment

Management plans are implemented throughout the construction phase and are used as the primary tool in considering what has to be done, when it is done and what document is required to verify compliance to the projects specifications.

The action plans are used in conjunction with the risk management process, whereby risk treatments and/or controls, identified during risk assessment and reports will be distributed to the concerned for implementation.

##### Level 6 – Forms, Supporting Documents and Safe Work Practices

Forms and supporting documents are provided as tools to ensure conformance with procedures.

##### Occupational Health and Safety Policy

* 1. **Occupational Health and Safety Policy**

The <COMPANY NAME HERE> **Occupational Health and Safety Policy** describes <COMPANY NAME HERE> commitment to provide a healthy and safe environment where no person should suffer injury or illness as a result of being associated with our construction operations

The Environment Health and Safety Policy is displayed on the Intranet and at the site office, and communicated to staff and other interested parties via inductions, trainings and ongoing awareness programs.

Refer Appendix 1 for HSE Policy

1. **Objectives and Targets**

As a means of assessing HSE performance during construction of the project, Environmental Health and Safety objectives and targets have been established.

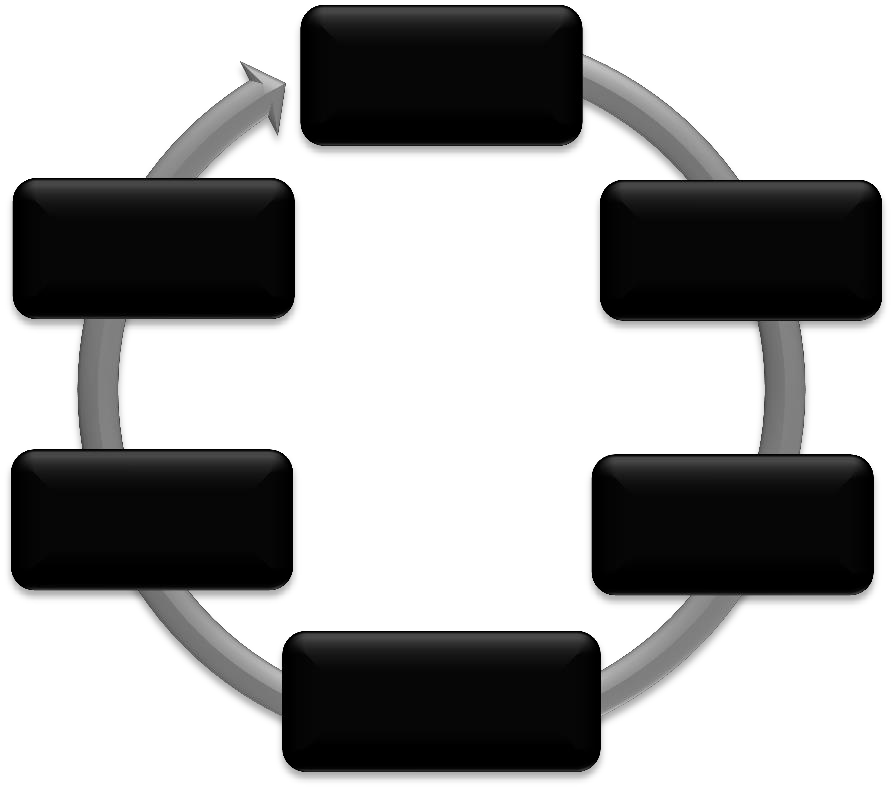
The performance of the project against the objectives and targets will be reflected each month in the monthly report or the HSE Status Chart and reviewed by project senior management.

## Health and Safety Strategy

##### Occupational Health & Safety Management System

<COMPANY NAME HERE> is committed to the highest standard of responsibility in every activity. It is the responsibility of the employee to comply with all applicable laws, regulations and standard - OHSAS 18001:2007

Do



Continuous Improvement

Act

Management Review

OH&S Policy

Check

Checking

Planning

Plan

Implementation and Operation

##### Occupational Health and Safety Policy

* **Planning (Plan)**
  + Hazard identification, risk assessment and determining controls
  + Legal and Other Requirements
  + Objectives and Programme(s)

##### Implementation and Operation (Do)

* + Resources, roles, responsibility, accountability & authority
  + Competence, training and awareness
  + Action plans
  + Set HSE objectives and targets
  + Communication, Participation and Consultation
  + Communication
  + Participation and Consultation
  + Documentation System
  + Control of documents
  + Operational Control
  + Emergency Preparedness and Response

##### Checking (Check)

* + Performance Measurement and Monitoring
  + Evaluation of compliance
  + Incident Investigation, Non-conformity, Corrective & Preventive Action
  + Incident Investigation
  + Non-conformity, Corrective & Preventive Action
  + Control of Records
  + Internal Audit

##### Review (Act)

* + Management review
  + Review HSE targets and objectives

## Responsibility and Accountability

##### Organisation Chart

The Project Organisational chart, appended as Appendix 2, specifies the <COMPANY NAME HERE> personnel responsible for the implementation of the Environmental Health and Safety and Management System

##### Roles & Responsibilities

<COMPANY NAME HERE> has identified appropriate levels of individual responsibility and accountability for managing safety across all roles within the project team.

HIT Management and project leadership are committed to as far reasonably possible providing services and products in a safe, health and responsible manner with due care to the environment, employees, visitors and the general public.

All Project and contractor personnel take responsibility for QHSE. However, the leadership team ensures a safe and healthy workplace, with ultimate QHSE responsibility resting with the Project / Production Manager. In meeting their responsibilities, the Project / Production Manager and Managing Director ensures:

* Production HSE risk has been identified and managed using established risk management tools. Approved local controls are in place to address operational risks and action is taken where the controls are determined to be ineffective;
* Project activities HSE deliverables, objectives and performance and reporting measures are set and communicated;
* The minimum HIT HSE requirement are identified communicated, applied and met;
* HSE compliance and resource provisions are addressed during the project execution;
* Regular consultation and engagement with personnel on HSE matters;
* All HIT personnel and contractor personnel hold appropriate competency level required to safely complete the activity and there is supporting training in up skilling and/or maintaining skill levels;
* Project leadership teams are visible and demonstrate their HSE leadership through measureable actions that include:
* Regular HSE walkthroughs, including engagement with personnel on HSE conversations when the opportunity arises;
* Participation in HSE inspections and attendance at HSE meetings;
* Acting as a role model for compliance encouraging their personnel to do the same;
* Participating in incident investigations and assurance activities; and
* The role of the QHSE Manager and HSE team is to provide guidance and expertise on HSE matters and HSE remains a line manager responsibility.

##### C o r p o r a t e HSE M a n a g e r

The Corporate HSE Manager is allocated overall responsibility for HSE for <Company Name here> and directly reports to the General Manager for all Health and Safety matters. The Corporate HSE Manager’s Responsibilities are but not limited to:

* + - Ensure <Company Name here> Project HSE system is implemented.
    - Ensure <COMPANY NAME HERE> operations identifies, monitors and complies with the current legislation for environment health and safety
    - Ensure that the <COMPANY NAME HERE> safety management system, risk assessment, procedures and SWMS reflect the requirements of current legislation, standards and other requirements to environment health and safety.
    - Ensure appropriate control measures and other safe systems of work are implemented
    - Provide appropriate resources (e.g. budget, human, equipment and training) for achieving its HSEMS objectives.
    - Ensure that the <COMPANY NAME HERE> Management System, risk assessment, procedures and SWMS reflect the requirements of current legislation, standards and other requirements to health and safety.
    - Monitor the health and safety of employees.
    - Monitor conditions, discharges and emissions at any workplace under the employer’s management and control.
    - Promote a positive workplace health and safety culture.
    - Engage in risk workshops to identify, assess and determine appropriate controls for all potential risk and opportunity where required.
    - Attend projects to monitor and discuss HSE issues with project management, supervisors and workers.
    - Monitor, resolve and prevent significant HSE issues and share lessons learnt;
    - Conduct HSE consultation and communication on health and safety matters where required.
    - Review HSE performance including adequacy of resources and provision of clear direction in HSE.
    - Provide and collate incident, illness/injury information and statistics. Review and analyze.

##### P r o j e c t D i r e c t o r

* + - Be aware of Project HSE Plan, Construction methods and HSE requirements.
    - Provide appropriate resources (e.g. budget, human, equipment, and training) for achieving its HSEMS objectives.
    - Ensure appropriate control measures and other safe systems of work are implemented
    - Responsible for establishing and resourcing the project team to meet the requirements of the <Company Name here> HSE Management System at the Project.
    - Ensure and facilitate the effective implementation of the Project Health, Safety and Environmental Management Plan and have line control of <Company Name here> project personnel.
    - Provide such information, instruction, training and supervision to employees, as is appropriate to enable those persons to perform their work in a way that is safe and without risks to health or the environment (in appropriate languages).
    - Provide appropriate facilities for the welfare of employees.
    - Ensure <COMPANY NAME HERE> operations identifies, monitors and complies with the current legislation for health and safety, licenses, certificates of competency, notification, registrations and approvals.
    - Ensure the understanding, implementation and maintenance of EHSE HS policies at all levels.
    - Ensure that all procedures are distributed / available, implemented and fully understood, and that they meet all contractual requirements.
    - Develop, implement and establish work methods (Method Statements / Work Instructions), explaining sequence of operation / activity, outlining potential hazards and necessary precautions and control measures required.
    - Promote a positive workplace health and safety culture.
    - Engage in risk workshops to identify, assess and determine appropriate controls for all potential risk and opportunity where required.
    - Approve reports of environmental issues and non-conformances to client in the regular reporting structure and when an issue arises.
    - Establish realistic project specific measurable targets.

##### S i t e M a n a g e r

* + - Be aware of Project HSE Plan, construction methods and safety requirements.
    - The Site Manager is responsible and accountable for the sites HSE performance.
    - Implements and maintains a formal written HSE program that encompasses applicable area of loss prevention and is consistent with corporate policy.
    - Ensure appropriate control measures and other safe systems of work are implemented.
    - Empower employees to stop work or remove themselves from a work situation of immediate or imminent exposure to a hazard if they consider it constitutes a reasonable risk to the health and safety of themselves, their colleagues, the public and / or the environment.
    - Establishes controls to assure uniform department performance complies with the HSE management systems. Ensure <COMPANY NAME HERE> operations identifies, monitors and complies with the current legislation for health and safety, licenses, certificates of competency, notification, registrations and approvals.
    - Ensure that the <COMPANY NAME HERE> Management System, risk assessment, procedures and SWMS reflect the requirements of current legislation, standards and other requirements to Environment Health and Safety.
    - Promote a positive workplace health and safety culture.
    - Engage in risk workshops to identify, assess and determine appropriate controls for all potential risk and opportunity where required.
    - Have a working knowledge of the <COMPANY NAME HERE> Management System.
    - Establish safety in design review process and conduct risk workshops with relevant stakeholders to identify, assess and determine appropriate controls.
    - Establish the projects site establishment and planning requirements.
    - Identify and assess competency of employee’s incl. any unforeseen workforce requirements. Undertake training needs analysis and facilitate any training requirements.
    - Implement safe work practices and procedures.
    - Establish and apply rehabilitation and return to work procedures as required.
    - Ensure that <Company Name here> and its subcontractors’ SWMS / Risk assessments have been prepared before commencement of each relevant task or activity.
    - Ensure that <Company Name here> employees are trained in the Project HSE Plan and SWMS / Risk Assessments;
    - Conduct hazard inspections and ensure that hazards requiring rectification forms are completed where required.

##### P r o j e c t H SE M a n a g e r

* + - Ensure the compliance of local and international laws that are applicable to the undergoing work practices.
    - Be aware of Project HSE Plan, construction methods and HSE requirements.
    - Advise and assist the management in fulfillment of statutory obligations and implementation of Environmental Health and Safety management system
    - Provide appropriate resources (e.g. budget, human, equipment, and training) for achieving its HSEMS objectives.
    - Develop HSE committee and conduct HSE committee meeting on planned interval.
    - Employ or engage persons who are competent in relation to the management of the HSE to provide advice about the management of such issues.
    - Ensure appropriate control measures and other safe systems of work are implemented
    - Ensure, so far as is reasonably practicable, the safe use, handling, storage, transportation and disposal of materials, substances and wastes.
    - Provide and maintain plant, equipment and / or systems of work that are, so far as is reasonably practicable, safe and without risks to health or the environment.
    - Provide appropriate facilities for the welfare of employees.
    - Provide such information, instruction, training and supervision to employees, as is appropriate to enable those persons to perform their work in a way that is safe and without risks to health or the environment (in appropriate languages).
    - Empower employees to stop work or remove themselves from a work situation of immediate or imminent exposure to a hazard if they consider it constitutes a reasonable risk to the health and safety of themselves, their colleagues, the public and / or the environment.
    - Provide, without any cost to the employee, appropriate personal protective clothing and equipment which are reasonably necessary when hazards cannot be otherwise prevented or controlled
    - Monitor the health and safety of employees.
    - Monitor conditions, discharges and emissions at any workplace under the employer’s management and control.
    - Keep information and records relating to the management of the environment and the health and safety of employees
    - Ensure that the Project HSE Plan and associated procedures are implemented on the project.
    - Ensure <COMPANY NAME HERE> operations identifies, monitors and complies with the current legislation for health and safety, licenses, certificates of competency, notification, registrations and approvals.
    - Ensure that the <COMPANY NAME HERE> Management System, risk assessment, procedures and SWMS reflect the requirements of current legislation, standards and other requirements to Health and Safety.
    - Promote a positive workplace Health and Safety culture.
    - Have a working knowledge of the <COMPANY NAME HERE> Management System.
    - Establish Safety in Design review process and conduct risk workshops with relevant stakeholders to identify, assess and determine appropriate controls.
    - Complete project specific health and safety documents utilizing templates. Consult with workers where required.
    - Establish a health and safety resource library, including current legislation, standards, codes of practice etc. Communicate and monitor for change;
    - Exercise overall superintendence of HSE management system;
    - Reports directly to the Corporate HSE Manager over any issues pertaining to Health, Safety and Environment within workplace;
    - Oversee overall functioning of HSE personnel at site and advise them as necessary from time to time on matters pertaining to HSE;
    - Establish records filing system and maintain health and safety records;
    - Assess, establish and maintain first aid facilities to comply with project / regional / jurisdictional requirements.
    - Monitor HSE KPI’s and statistics for continual improvement and analysis.
    - Establish and maintain health and safety registers and wall charts;
    - Establish induction programme including site induction hand-out, registration form, stickers, inductor / s etc.

##### S a f e t y O f f i c e r

* + - Be aware of Project HSE Plan, construction methods and HSE requirements.
    - Responsible for administering the company’s HSE program under directives of the project / site-in-charge and is authorized to interact with project safety-in-charge for any matters requiring his attention.
    - Ensure that the <COMPANY NAME HERE> Management System, risk assessment, procedures and SWMS reflect the requirements of current legislation, standards and other requirements to health and safety.
    - Empower employees to stop work or remove themselves from a work situation of immediate or imminent exposure to a hazard if they consider it constitutes a reasonable risk to the health and safety of themselves, their colleagues, the public and / or the environment.
    - Ensure appropriate control measures and other safe systems of work are implemented
    - Promote a positive workplace health and safety culture.
    - Engage in risk workshops to identify, assess and determine appropriate controls for all potential risk and opportunity where required.
    - Have a working knowledge of the <COMPANY NAME HERE> Management System.
    - Complete project specific health and safety documents utilising templates. Consult with workers where required.
    - Establish records filing system and maintain health and safety records.
    - Establish and maintain health and safety registers and wall charts.
    - Identify and assess competency of employee’s incl. any unforeseen workforce requirements. Undertake training needs analysis and facilitate any training requirements.
    - Assess subcontractor and suppliers ability to comply with the project health and safety requirements.
    - Establish and implement permit to work systems as required.
    - Provide SC's with relevant health and safety documents and list of project risks and hazards including updates.
    - Obtain Health and Safety documentation from each SC prior to commencing. Register and review adequacy.
    - Review all potential health and safety hazards and risks for all design changes and communicate.
    - Monitor subcontractors activities and performance against SWMS’s.
    - Conduct inductions for all persons attending site and maintain records.
    - Obtain documentation for all powered mobile plant prior to entering site. Review adequacy, label, register and maintain records.
    - Identify and maintain a register of all onsite hazardous materials and dangerous goods.
    - Ensure STARRT briefings are conducted on a daily basis.
    - Obtain MSDS's no greater than 2 yrs old and provide adequate hazardous substances and dangerous goods storage facilities onsite.
    - Conduct Health and Safety inspections / safety walks, distribute for action, obtain sign-offs from SC and close out.
    - Conduct HSE consultation and communication on health and safety matters where required.
    - Identify and maintain all required certificates of testing for plant and equipment.
    - Implement emergency response procedures recovery planning outlined in EMP.
    - Record and register all first aid injuries. Investigate, report and monitor corrective actions where required.
    - Record, report and investigate incidents and near misses. Monitor corrective actions and distribute any lessons learnt.
    - Report and distribute non-conformances and implement corrective and preventative actions. Review effectiveness of corrective actions.
    - Implement safe work practices and procedures.
    - Facilitate the resolution of any disputes which may arise over workplace health and safety.
    - Understand the site condition at various stages of work from perspective of safety of personnel and machinery.
    - Advice the purchase department at site in procurement and usage of personal protective equipment.
    - Conduct Tool Box meetings and safety training for personnel at site and organise training for engineers / supervisors.
    - Guide site engineers / supervisors / workmen in implementation of the requirements outlined in the HSE plan
    - Report on all unsafe conditions on site to the Site Supervisor for rectification.
    - Stop any unsafe activities at site and report immediately to the HSE Manager.
    - Be constantly alert for unsafe conditions and bring such conditions to the attention of the supervisor and, if necessary, the site manager immediately.
    - Assist the HSE Manager in analyzing incident records, develop supervisory and employee educational programs and stimulate a high level of interest in Health & Safety through various employee-involvement activities.
    - Monitor the completion and quality of safety and environmental records provided by the Site Engineer.
    - Provide leadership to the site for the implementation of new technologies such as behavioral based safety management concepts.
    - Conduct HSE induction training as and when required.
    - Organize safety promotional activities like display of safety posters, slogans and other educative materials, competitions and awards, as well as safety day celebration etc.

## Reference Codes, Standards, Legislations & Guidelines

Legislative requirements are managed by the Administrative Manager and the QHSE Manager.

**Business Certifications and Permits**

* Write Here

**Acts and Regulations**

* Write Here

**International Standard Best Practices**

* Write Here

## Health & Safety Performance Measurement

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S/N** | **ITEM DISCRIPTION:** | **TARGET** | **This Week** | **Project to Date** | **Remarks** |
|  | Worked Hours |  |  |  |  |
|  | **LEADING** |  |  |  |  |
| 1 | Project Orientation/Induction |  |  |  |  |
| 2 | One Way (Safety) Moments |  |  |  |  |
| 3 | HSE Meetings |  |  |  |  |
| 4 | Safety Observation - BBS Reporting |  |  |  |  |
| 5 | Leadership Walkthrough Inspection |  |  |  |  |
| 6 | Near miss incident reporting |  |  |  |  |
| 7 | Audit Assessment/ Inspection |  |  |  |  |
| 8 | HSE Training |  |  |  |  |
| 9 |  |  |  |  |  |
|  | **LAGGING** |  |  |  |  |
| 10 | Lost Work day Case (LWC) |  |  |  |  |
| 11 | Road Traffic Incident (RTI) |  |  |  |  |
| 12 | Community Incident |  |  |  |  |
| 13 | Environmental Incident |  |  |  |  |
| 14 | First Aid Case (FAC) |  |  |  |  |
| 15 | Fatality |  |  |  |  |
| 16 | Restricted Workday Case (RWC) |  |  |  |  |
| 17 | Medical Treatment Case (MTC) |  |  |  |  |
| 18 | Total Recordable Case Frequency Rate (TRCFR) |  |  |  |  |

##### Incident Investigation

The purpose of incident investigation is to determine the “root cause’ of an incident so that corrective action can be taken to eliminate or control specific hazards to prevent the re occurrence, through the investigation of incidents, we are able to analyse and learn about causes, which in turn will give us a better control of incidents.

##### Th e I n c i d e n t I n ve s t i g a t i o n P r o c e s s

##### The incident investigation process contains 5 steps:

1. Gather information
2. Determine causes (direct and indirect)
3. Corrective action
4. Communication
5. Follow up

Step 1 - Gather Information

It is very important to perform an investigation. It should include:

* + - Supervisor Site Manager / HSE Personnel
    - Injured or involved employee
    - Witnesses
    - Company safety representative, if appropriate.
    - Other resources, if necessary.

The investigation team will examine the scene and visually see what took place. It is critical to document what was said and observed.

Step 2 - Determining Causes (Direct & Indirect)

As the investigation team gathers information for an incident, it is important to investigate the behavior involved in that incident. Between 90 to 96% of all injuries are caused by unsafe acts and behaviour

Behaviour falls into two categories; direct and indirect. Direct causes are usually easily identified and in most cases the incident investigation stops.

Step 3 - Corrective Action

An investigation report is then generated which identifies how the incident occurred, and establish whether it’s a direct and indirect causes. The next step is to identify the corrective action that will address the incident. Corrective actions that require little more

time to execute should be done immediately. However, the situation where the corrective action is more involved, the recommendation should involve a short and long range plan. These recommendations should be tracked to ensure closure.

Step 4 - Communication

Once the incident investigation report has been completed and the corrective action identified, it is important to communicate the incident report to site management and sub- contractors involved.

Step 5 - Follow Up

The final step (follow-up) is where a lot of incident investigation programs fail. Once an investigation has been completed and corrective actions have been identified, most investigations stop. The reason for this is to monitor the corrective actions. It is vital for the incident investigation process to develop a tracking system that will give you the capability to see what corrective items have not been completed. By having a monitoring system that tracks closure, a successful investigation program is implemented. Each site location should analyse their incident history for trends and guidance to provide future corrective actions.

##### Incident Reporting Process

Fill information needed in an incident report form:

* + - Name of injured person
    - Department or section
    - Activity
    - Exact place of Incident possibly including a sketch map or photograph if the incident is serious
    - Name of injured person, occupation, age, marital status, home address, length of employment with the company, registered disabled, names of witnesses address’ of witnesses, name and address of supervisor in charge of the job.
    - What was the injured party doing at the time of the Incident? Was the job being carried out authorized?
    - Full nature of the injury
    - Date and time of incident.
    - Probable cause of incident.
    - Outline any preventative measure taken.
    - Photographs

All Employees and other personnel to follow these incident procedures if someone is injured:

##### I n c i d e n t N o t i f i c a t i o n

Employees must report their injuries or occupationally related illnesses, as soon as possible to their employer or immediate supervisor. Supervisor will inform the HSE officer. Incidents resulting in a fatality, the hospitalization of three days or more, property damage, shall be reported to the Engineer and Island Security immediately. Formal Incident notification report shall be submitted to the relevant parties with 24 hours. Also, local authorities are to be notified.

##### I n c i d e n t I n v e s t i g a t i o n a n d R e p o r t s

Incident exposures and near miss incidents that occur on the job site shall be reported to the PMC by the Project Senior HSE Manager. In-depth investigation shall be conducted identifying all causes and recommending hazard control measures completed by Project HSE Manager. Reports shall be sent to the <COMPANY NAME HERE> Project Director, QHSE Manager within 24 hours. Incident investigation analysis report shall be submitted for all lost time major/reportable incidents to PMC and, Island Security and SRA within 7 days of incident.

##### M e d i c a l As s i s t a n c e

Contact the <COMPANY NAME HERE> HSE department for first aid assistance. The injured person’s supervisor must provide the injured employee with a list of preferred physicians to seek immediate medical treatment. In the case of any major reportable Incident (Major injury / LTI) immediately inform Emergency Service (999).

##### P u b l i c I n f o r m a t i o n

Shall be given to only authorized personnel (i.e. the office of public safety, and where appropriate, request assistance from the Local Authority.

##### S e c u r e t h e I n c i d e n t Ar e a

Except for rescue and emergency procedures, the Incidental area must be tightly and quickly secured for all major accidents. The incident scene shall not be disturbed until released by the investigating team.

Island HSE and <COMPANY NAME HERE> Project Emergency Response system will take precedence upon any incident on site.

##### On- S i t e F i r s t Ai d

**E m e r g e n c y N u m b e r s**

Post emergency telephone numbers and locations of facilities including, but not limited to, hospitals, police, fire and emergency medical services, in conspicuous locations at the job site and at all telephone locations

##### F i r s t a i d s u p p l i e s

First-aid supplies must be accessible for immediate use and be of sufficient size and number to handle common first aid incidents. The specific number and type of first-aid kits to be at each work location

## Health & Safety Audit System

An internal audit program for reviewing HSE is required and must be implemented to meet the minimum standards within the industry. The term ‘audit’ refers to a systematic, documented process to objectively collect and evaluate information in order to verify the sites H&S performance. The audit process will verify the existence of HSE Management systems through employee interviews, review of documents, field observations and verifying testing to ensure that safe working conditions and managements systems are in place and functioning as intended.

Audit is based on the corporate policy and Management system and is built around the company’s core health and safety values and beliefs, which supports our business strategies. In addition the audit program provides direction for achieving compliance with Management systems.

Occupational health and safety auditing programme shall be established and consist of:

* Subcontractor compliance audits;
* Internal systems audits which will focus on those sections of the HSE Management Plan that are relevant to current operations;
* External Audit

##### Objectives

The objectives of HSE Audit program are to:

* + - Comply with HSE policy, Management system and applicable regulations.
    - Comply with Project HSE requirements and Regulatory Framework
    - Increase awareness of company standards and regulations.
    - Communicating audit findings and recommendations to appropriate levels of <COMPANY NAME HERE> Management.

##### Audit Standards and Criteria

The standards and Criteria for each audit include:

* + - Occupational Health and Safety Management System, OHSAS 18001:2007
    - All audit requirements of client organizations.
    - <COMPANY NAME HERE> Policies, plans and procedures
    - <COMPANY NAME HERE> Project HSE Plan
    - HSE management practices

##### Requirement

<COMPANY NAME HERE> shall demonstrate compliance to:

* + - Develop, implement and maintain appropriate risk based HSE Audit Procedure(s);
    - Develop, implement and maintain appropriate risk based HSE Inspection Procedure(s)
    - Develop, implement and maintain appropriate non-conformance and corrective action procedure(s); and

##### HSE Audit Program

<COMPANY NAME HERE>HSE Audit Programme/procedure is controlled by the QHSE Manager, and shall address, at a minimum:

* + - Scope, criteria and objectives of audits to be conducted;
    - Audit program responsibilities, competencies and resources;
    - Audit program planning and implementing process, including;
      * Documented criteria
      * Frequency and schedules;
      * Methods of collecting and verifying information;
      * Reporting audit results; and
      * Audit program record keeping;
    - Audit program monitoring and review; and
    - Internal and external reporting requirements.

##### Qualifications for HSEMS Auditing Personnel

* + - Internal HSEMS Auditors shall be suitably knowledgeable, experienced and competent to undertake HSE audits

## Office Health and Safety Design Management

##### Health and Safety in the Office

Office Manager with consultation of QHSE Manager is responsible to ensure safe working station for office staff. In addition office manager shall carry out a regular inspection in office to ensure the office safe environment and available resources are in good working condition and ergonomically correct.

##### L i g h t i n g

Offices require sufficient light to enable work to be undertaken without risks to the occupants. There are standards which contain guidance to the lighting levels in workplace environments.

The quality of light is important and a mixture of natural light and artificial systems is the best method of providing the correct lighting level.

##### Te m p e r a t u r e

Thermal comfort is subjective. There are a number of factors that can affect thermal comfort including air movement, humidity, type and amount of clothing worn, and the type of work undertaken.

The temperature in workrooms should normally be at least 20 degrees Celsius, unless much of the work involves severe physical effort in which case the temperature should be at least 16 degrees Celsius. Depending on the number of factors above, the temperature may not ensure reasonable comfort.

##### M a c h i n e r y

Photocopiers are essential office machines that use electrical and mechanical parts to work. Unauthorized repairs or servicing from an untrained person could create unnecessary risks and should not be permitted. Office staff should only carry out basic functions recommended by the machine supplier, such as changing toner cartridges, unless properly trained.

Laser printers emit ozone during the printing process and this is controlled by suitable filtering. Measurements of ozone from laser printers within the Office have shown that there should be no risk to any person’s health. Office machines should be maintained on a regular basis by the supplier and authorized person.

##### N o i s e

Noise at work is controlled by legislation to prevent harm to hearing. Action levels are prescribed where an employer should instigate protective measures. These action levels would not normally be exceeded in an office. However noise can be a nuisance and a distraction if concentration is required. Office layouts can prevent unnecessary noise e.g. large photocopiers being placed in their own machines room. Desk printers are now much quieter than they were several years ago, and this has helped reduce the overall noise level in offices. Where noise is a problem than other control methods such as acoustic absorbent room dividers, or acoustic absorbent wall or ceiling tiles will be considered.

##### Manual Handling

Poor lifting and carrying technique causes injury to numerous parts of the body. Although there are members of staff who lift objects on a daily basis, the techniques in manual lifting objects is vital in preventing injury.

Tips on Efficient Lifting:

* + - Is it necessary to lift the load?
    - Assess the lift and decide if help is needed
    - Obtain a firm grip on the load (use gloves if necessary)
    - Bend at the knees and not the waist
    - Use your legs and not your back to thrust upwards
    - Keep the load near to your body
    - Do not twist your spine when lifting or carrying loads

##### Slips, Trips and Fall

The most common causes of Incidents, not just in the office but in industry commerce and the service by industries are slips, trips and falls. The following hints will prevent most of these types of incidents:

**Floor surfaces:** Wipe up spills immediately, wear appropriate footwear, display cautionary notices during cleaning and polishing, immediately report and ensure repairs to lose carpet and any damaged floor coverings.

**Chairs:** Routinely inspect chairs for condition. Do not use chairs for climbing.

Electrical leads: Ensure leads do not cross walkways or workstations. Change the office layout if necessary.

##### Welfare Facilities

Welfare facilities include the provision of adequate toilets and washing facilities. The facilities should be sufficient in numbers, clean and well maintained and have adequate ventilation. Hot and cold water, soap-dispensers and hand-drying equipment should also be in place.

##### Emergencies

If case of fire, sound the alarm by breaking the glass in one of the fire alarm call points. They are situated on every floor, and can also be found near exit doors. In the event of a fire alarm, all staff must follow the procedures shown on the fire action notices displayed in office. The procedures are also laid down in the emergency procedures. Know your way out of the building, and remember it may not be possible to exit the way you came in, so become familiar with alternative exit routes. Evacuate the building and make way to the assembly point shown on the fire action notices. Wait for permission to re-enter the building, or other instruction that may be given. A trial evacuation must be carried out every six months.

## HSE Induction / Orientation

HSE Orientation is the first step to creating a culture of safety on site. All personnel prior to commencement of works must be able to recognize hazards, rules on site and a clear understanding of the safe work practice they need to follow on site.

All persons visiting the site shall be made aware of some basic safety guidelines which have been highlighted. All persons working on site are inducted with at least the safety guidelines and requirements detailed below:

* + - Site layouts, nature of work and scope of worker’s duties.
    - Intimation of any out of bound areas
    - Awareness about HIT’s Health and Safety Policy
    - Employees (if applicable) Safety Handbook
    - HIT Safety Induction
    - Existing safety practices and procedures
    - Employee Safety Workshops card and tests
    - Requirement of PPE
    - Emergency response and exits routes
    - Washrooms/ lunchrooms
    - First Aid facilities
    - Signage/ Warnings
    - Emergency assembly areas
    - Site timings
    - Employer’s responsibilities vs employee’s responsibilities
    - Incident reporting procedures, reportable incidents
    - Location and Demonstration of use of fire extinguishers
    - Housekeeping standards

Induction attestation forms shall be completed and signed by inductee prior to granting access to site. All visitors shall be guided by assigned HIT personnel while within production area.

## Security and Site Access

##### S e c u r i t y

<COMPANY NAME HERE> shall ensure, at all times, that no unauthorized persons are permitted access to the site and shall display all necessary warnings that the employer and contractor shall be indemnified against any claim for death or injury to persons unauthorized to visit the site.

<COMPANY NAME HERE> shall employ reliable 24 hour watchmen whose duty it shall be to prevent entry to the work site of any unauthorized person or persons, to guard against fire and damage from the elements and theft of material. Watchmen shall be on duty at all times, including holidays, weekends and during shutdown due to any cause whatsoever.

The security provides shall implement an effective access control procedure that will include, as a minimum the following:

<COMPANY NAME HERE> shall, at all times, access the site exercising such care and in such a manner so as not to disrupt existing traffic flow and shall maintain all existing access passages in a clean and proper condition to the satisfaction of the Employer and in accordance with Municipality regulations in force.

<COMPANY NAME HERE> shall carry out its work in such a manner as to cause minimum inconvenience to occupants of the existing building and adjoining properties, but in any event it shall keep indemnified the Employer for any action resulting from breach of this requirement.

## Safe Work Method Statement

Safe Work Method Statement (SWMS) outlines the health safety environment precautions to be undertaken to complete a specific work activity. A SWMS is provided for moderate to extreme work undertaken activities to ensure that any potential hazards and associated risks are identified and suitable systems are in place to ensure the health and safety of personnel undertaking a particular activity or task and maximum protection to the environment. SWMS will be developed by <COMPANY NAME HERE> for its employees undertaking construction work or by subcontractors for all works identified as having moderate to extreme risk potential. Where practicable, SWMS shall be developed by a composition of project personnel including, supervisors, leading hands, employees and employers that are directly involved in a particular activity, i.e. through a consultative approach.

SWMS developed for a specific work activity must include as a minimum:

* Describe how the work is to be carried out;
* Identify the job steps which have HSE risks (i.e. tasks which involve danger or risk to the environment, health and safety);
* Identify the HSE risks for each job step, i.e. what can injure people or the environment.
* Describe the control measures to be applied to the work activities, i.e. what will be done to make the work safe & afford maximum protection to the environment.
* Include a description of any plant, equipment or hazardous substances to be used in the work and records provided.
* List the qualifications of the personnel doing the work; and
* Identify training or permits required for the work

SWMS or equivalent documentation prepared by subcontractors and suppliers must be submitted to <COMPANY NAME HERE> prior to the commencement of work and reviewed using the <COMPANY NAME HERE> Method Statement Review Sheet. The effectiveness of the implementation of SWMS will be undertaken by <COMPANY NAME HERE> personnel on an on- going basis. That is, formally through weekly inspections carried out by the Safety Department and additional formal weekly inspections carried out by the area Site Supervisor or other appointed personnel using <COMPANY NAME HERE> HSE work place inspection.

## Risk Assessment / Hazard Identification

The goal of any workplace health and safety strategy is to eliminate or reduce all workplace risks. This can be achieved by setting standards in accordance with current occupational health and safety legislation, implementing measures to meet those standards, and monitoring that they are maintained.

The Project will incorporate a process of hazard identification and risk assessment and monitoring into all activities including plant & equipment (supply, inspection, maintenance, commissioning, and isolation).

Typically this shall be implemented through one or more of the following as appropriate.

* Completion of project risk workshops and health and safety risk register at different stages during the project to ensure that risks are identified; assessed; and controls implemented and reviewed to ensure on-going effectiveness
* Implementation of our management practices and procedures.
* Development of Project HSE Plan and safe work method statements by <COMPANY NAME HERE> and Subcontractors for work activities to ensure that any potential hazards and associated risks are identified and suitable systems are in place to ensure the health and safety of personnel undertaking a particular activity or task. SWMS prepared by subcontractors will be submitted to <COMPANY NAME HERE> prior to the commencement of work on project and reviewed by <COMPANY NAME HERE> in consultation with the subcontractor representative and monitored on a regular basis.
* Completion of a plant hazard assessment for every item of mobile plant and equipment;
* Completion of a risk assessment where it has been identified, or where it could be reasonably be expected that an exposure will take place to an acknowledged hazardous substance.
* Various daily, weekly and monthly site inspections in accordance with <COMPANY NAME HERE>HSE Procedures.

##### W h a t i s a H a z a r d ?

A Hazard is any situation with the potential to cause injury or illness, or, in the case of dangerous goods, damage property. Some examples of hazards are:

* Airborne contaminants (fumes, dust, fibres)
* Noise
* Dangerous chemicals or harmful substances
* Moving vehicles
* Manual handling (lifting, carrying, pushing, pulling, etc.)
* Oil spills
* Naked flames
* Operating machinery

Specific regulations set out the legal obligations for managing hazards such as manual handling, noise, confined spaces and plant (machinery).

##### H ow a r e h a z a r d s i d e n t i f i e d ?

Hazards can be identified in a number of ways:

* By consulting health and safety representatives and employees
* Workplace inspections
* Examining records of incidents and dangerous occurrences in the workplace
* Keeping up to date with information released about particular products and processes
* Contact other workplaces using similar processes

##### W h a t i s R i s k ?

A risk is the product of the measure of the likelihood of occurrence of an undesired event and the potential adverse consequences which this event may he upon:

* People : Injury or harm to physical or phychological health
* Environment :Water, air , soil, animal, plants and social

##### W h a t i s R i s k As s e s s m e n t ?

Once hazards have been identified, an assessment of the risks associated with each hazard determines the likelihood of injury or illness being caused by that hazard.

When assessing the risk associated with any hazard, it is necessary to ask the following questions:

* Who is exposed to the hazard?
* How often are people near the hazard?
* Has this hazard already caused any problems?
* How easily could someone be hurt?
* How common is it for this hazard to cause problems in other workplaces?
* Which factors relating to that hazard need to be taken into account, according to health and safety law?
* Which factors or specific aspects of the work are increasing the likelihood of injury or illness?

It is important to record the identified hazards and classify them according to type of potential injury or illness.

* Hazards that could kill or cause serious injury, permanent disability or ill health.
* Hazards that might cause injury or illness resulting in an employee being off work for several days.
* Hazards that might cause injury or illness resulting in an employee requiring first aid.

Risk assessment also involves deciding whether it is likely that someone could be hurt by being exposed to those hazards, and establishing whether it is:

* Rare
* Unlikely
* Possible
* Likely
* Almost Certain



##### Risk Matrix

This Project has identified a risk class/ranking for potential workplace hazards by referring to the categories in the matrix below.

STEP 1: The organisation identifies the consequence for each potential risk by using the table below.

##### C o n s e q u e n c e

* + - The source of hazards and the potential consequences in the event of unplanned contact must be analysed to determine the significance of this hazard. Consider the worst case scenario i.e. if direct contact with the substance or machine is made, then what would the outcome / result be?
    - Any control measures that are already in place, e.g. Machine guards, permits to work and protective clothing should not be taken into account unless they address the risk at source thus making the hazard less dangerous without factors such as human error, willful removal or neglect affecting the hazard.
    - Assess the consequence / severity of contact with the hazard. Always use the worst case scenario; if direct contact with the substance or machine is made, what would be the result?
    - Consequence can be expressed in the following matrix:

|  |  |
| --- | --- |
| **Level** | **Description of Consequence** |
| Low (1-06)  (Low level of harm) | Incident that has the potential to cause persons to require first aid. |
| Medium (07-14) (Medium level of harm) | Potential temporary disability or minor structural failure / damage. |
| High (15-25)  (High level of harm) | Potential death, permanent disability or major structural failure / damage. |

Table 5 - Risk Matrix

STEP 2: Using the table 6, the organisation determines how likely it is that the risk will occur and result in the consequence identified above.

##### L i k e l i h o o d / F r e q u e n c y o f E x p o s u r e

* + - Determines how regularly the exposure is realized; are persons exposed on a daily basis or less regularly.
    - Use Company, national and international incident frequency rates to determine likelihood and frequency of exposures.
    - Likelihood/Frequency of Exposure can be expressed in the following matrix

##### P r o b a b i l i t y

Determine the probability of the hazard causing harm, factors that include

* + - Previous incidents associated to the situation
    - Location of the hazard, possible distractions
    - Duration and extent of exposures
    - Environmental conditions, lighting, noise etc.
    - Condition of machinery and competency levels of persons exposed.

|  |  |
| --- | --- |
| **Likelihood** | **Probability** |
| Almost Certain | More than 90% chance of occurrence |
| Likely | 75% - 90% chance of occurrence |
| Possible | 40% - 75% chance of occurrence |
| Unlikely | 10% - 40% chance of occurrence |
| Rare | Less than 10% chance of occurrence |

Table 6 - Likelihood and Probability

##### R i s k R a t i n g C a l c u l a t i o n

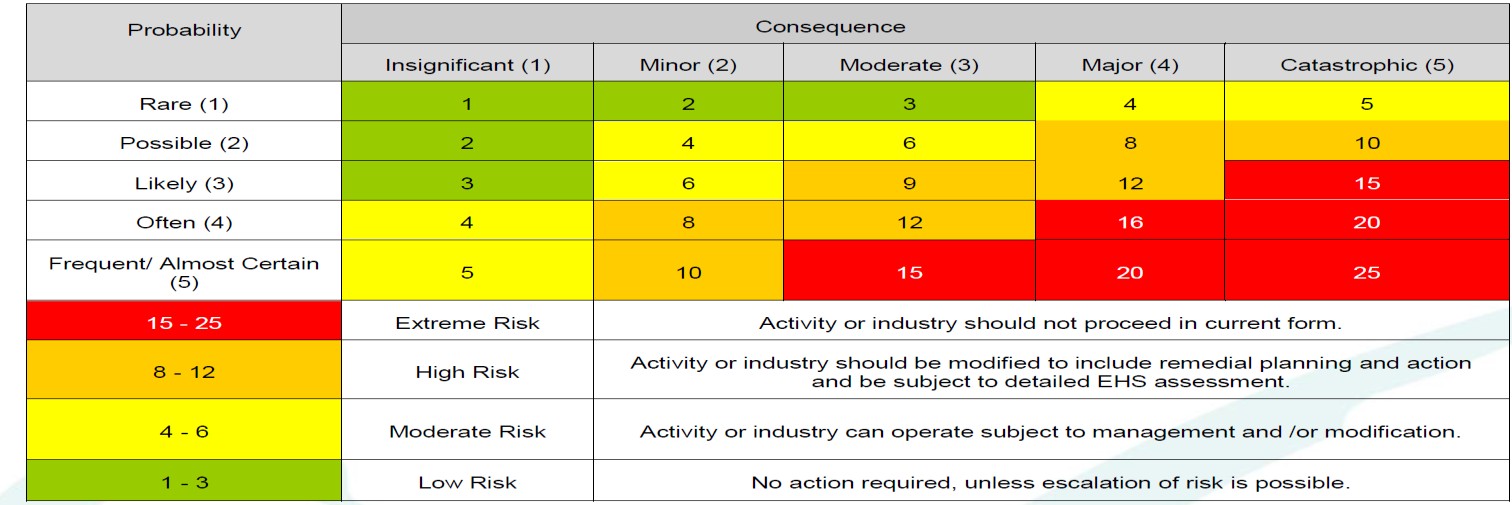
Risk Ranking

=

|  |  |  |
| --- | --- | --- |
| Likelihood | X | Severity |

* + - Severity is also sometimes expressed as consequence.
    - The **Likelihood (frequency of exposure)** indicates ***probability of*** the potential situation that may occur or event may be expected to occur.
    - The **Severity** indicates the ***significance (or consequence) of the damage / injury*** when the phenomenon occurs. The consequences for persons, property and environment have to be taken into consideration.
    - **Likelihood** estimates the ***chance or probablity*** an at-risk behavior or environmental condition will cause an injury or damage. The possibility of a condition or event occurring.
    - Use past incidents to determine factors such as severity, likelihood and frequency of exposures to hazards.

STEP 3: Using the risk matrix below, the organisation identifies the risk class/ranking.



##### W h a t i s R i s k C o n t r o l ?

When hazards have been identified and the risks to health and safety assessed, the risks need to be controlled. Risk control is a requirement of the occupational Health and Safety to provide and maintain a working environment for employees which is safe and without risks.

The term “as far as is reasonably practicable” is defined in the OHS Act as taking into account:

* + - The likelihood of a hazard or risk occurring (the probability of a person being exposed to harm).
    - The degree of harm that would result if the hazard / risk occurred (the potential seriousness of injury or harm).
    - What the concerned person knows, about the hazard / risk and eliminating that hazard / risk.
    - The availability and suitability of ways to eliminate or reduce the hazard or risk.
    - The cost of eliminating or reducing the hazard or risk.

The objective is to eliminate the source of risks to the health, safety and welfare of persons at work. Regulations and supporting the requirements for elimination of risks is the first step in risk control.

##### E L I M I N AT I O N

Eliminating toxic substances and hazardous plant or processes in the work environment. If risks cannot be eliminated, occupational health and safety legislation requires that they be reduced by using one or more of the following methods.

##### S U B S TI TU TI O N

Substituting a hazardous toxic substance with one less harmful. Substitution is not only a preferred control method; it may also be the less expensive. For example, substituting a less hazardous material to control a vapour hazard makes more sense than installing an expensive ventilation system. Guards on power tools, use effective barriers and edge protection, enclose noisy machinery.

##### I S O L ATI O N

Enclosing or isolating a hazard toxic substance, plant or process from employees. To eliminate or reduce the risk of injury or illness using a fume cupboard or sound enclosure booths are examples of moving a hazardous process away from the main work area (and other employees) to a site where emissions can be controlled.

##### E N G I N E E R I N G C O N T R O L S

* + - Changing processes, equipment or tools.
    - Machine guards and Machine operation controls.
    - Ventilation to remove chemical fumes and dusts, and using wetting down techniques to minimize dust levels.
    - Changing layout of work levels to minimize bending and twisting during manual handling.
    - If a risk to workplace health and safety remains the same after the above methods have been used administrative controls should be applied. If these are still not adequate, personal protective clothing and equipment must be worn. These methods of risk control are not preferred because the source of the risk is not eliminated or reduced.

##### AD M I N I S T R AT I V E C O N T R O L S

* + - To change work procedures in order to reduce exposure to hazards.
    - Reducing exposure to hazards by job rotation.
    - Limiting the number of employees exposed to the hazard by limiting access to hazardous areas.

##### P E R S O N AL P R O TE C TI V E C L O TH I N G AN D E Q U I P M E N T

An effective personal protective clothing and equipment system requires considerable effort by the employer to ensure that employees are protected from hazards.

* + - Proper Protective Devices are selected.
    - Employees are individually fitted with proper guidance.
    - Proper instruction in the use of personal protective clothing and equipment should be provided.
    - An effective system of cleaning and maintenance.

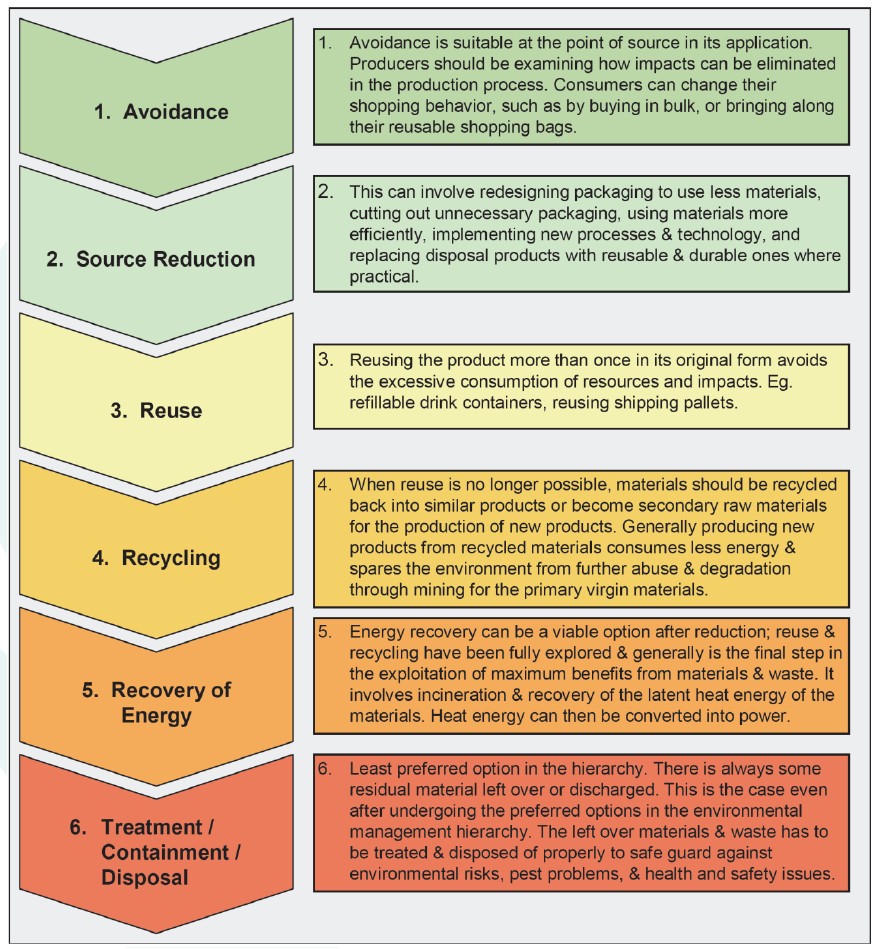
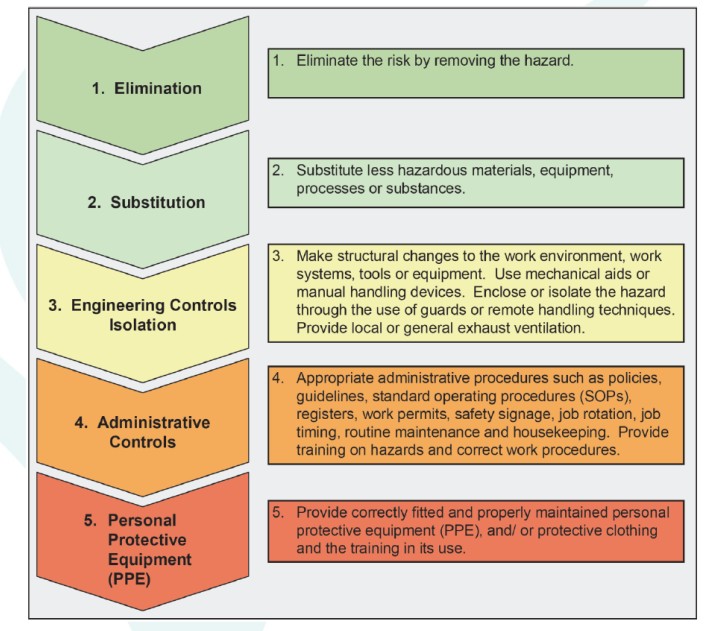
Administrative controls and protective clothing and equipment may provide interim solutions in a planned program to eliminate or reduce a particular risk. They may be used in addition to other control methods.

Prior to commencement of work, Risk Assessments will be carried out by the Subcontractors’ competent person as well as <COMPANY NAME HERE> Project HSE Manager for each activity (with risk involved). The Risk Assessment should detail the potential hazards, harm, risk rating, control measures, responsible person and residual risk.

Risk Assessments will be reviewed by the <COMPANY NAME HERE> Project HSE Manager and will be submitted to Client for approval. Risk Assessments are reviewed when the working condition is changed and it is also reviewed six monthly despite no change in condition.

Any changes or alterations to the work are subject to the review and approval of risk assessment.

|  |  |
| --- | --- |
|  |  |
| **Occupational Health & Safety Control Hierarchy** | **Environmental Control Hierarchy** |



## 

## Management Review

Management Review (Annual System Review) is undertaken to confirm the continuing suitability and effectiveness of the <COMPANY NAME HERE> Management Systems, ensuring that it meets current contractual and <COMPANY NAME HERE> requirements. The management review is chaired by the Systems Manager or the Corporate OH&S Manager and attended by senior management as deemed necessary. The inputs to management review for occupational health and safety management system include:

* Results from internal audits and evaluations of compliance with legal and other requirements;
* The results of participation and consultation;
* Relevant communication from external parties, including complaints;
* The HSE performance of your organization;
* The extent to which the objectives have been met;
* The status of incident investigations, corrective and preventive actions;
* Follow-up actions from previous management reviews;
* Changing circumstances, including developments in legal and other requirements related to HSE, and Recommendations for improvement.

## Health and Safety Management System Procedure

##### Visitor Safety

Visitor’s entry on the project is restricted. Visitors are made aware of project safety rules and policies that affect them and should be fully equipped with P.P.E. (Safety helmets, Safety shoes, and visibility vest) before going into the construction area.

##### R e s p o n s i b i l i t i e s

All employees, <COMPANY NAME HERE> or sub-contractors acting as an escort or point of contact for visitors will be responsible for assuring that each visitor reports to reception and has been provided with the proper badge, necessary safety equipment, safety rules and emergency instructions. <COMPANY NAME HERE> shall notify the PMC of any & all visitors on the site, for information.

<COMPANY NAME HERE> host shall not permit unescorted visitors through construction areas, unless they have authorization and approval from the <COMPANY NAME HERE> Site Management.

Designated employees such as receptionist or Security officers are responsible for assuring that all visitors are properly cleared and have received the proper badge, safety equipment and direction and HSE personnel to induct them if necessary.

Safety officer is responsible for:

* + - Instructing the security guard for complying with the above-mentioned rule.
    - Upon request, counseling visitors about safety rules and possible hazards pertaining to construction areas are authorized to visit.
    - All visitors to report to Site office reception to undergo visitor’s Induction.
    - All visitors to fill and duly sign Visitor Induction form prior to visit the construction Site.
    - Visitor to report back to reception.

##### R e s t F a c i l i t i e s

* + - The facilities for taking meal breaks should be sheltered from the wind and rain if necessary.
    - Smoking is prohibited in rest areas. Separate area will be allocated off site for smoking.
    - Do not store plant, equipment or materials in rest areas.
    - Air Conditioning for workers during the summer months to main the temperature below 25° Celsius.
    - Pedestal fans will be provided for rest areas, if necessary.

##### D r i n k i n g W a t e r

There should be a sufficient supply of drinking water. Whenever possible it should be supplied direct from tanks. Water is store, protected from possible contamination and make sure it is changed often enough to prevent it from being contaminated. Clearly mark the drinking water supply to prevent it being confused with water which is not fit to drink or hazardous liquids. Drinking water tanks and taps will be equipped with marked filters and must be changed as per manufacturer’s recommendation (min 15 days). Drinking water will be inspected on daily basis.

##### M e s s Ar e a / C a n t e e n

* + - A clean and approved canteen is to be provided on site.
    - Canteen will be inspected by HSE Department on weekly basis.
    - A hygienic surrounding will be maintained around the canteen area.
    - Food quality will be inspected randomly.

##### P e s t C o n t r o l

* + - A three month pest control will be carried cut around welfare amenities (toilets, wash area, canteen, and rest area).
    - Records of pest control will be kept in site office.

##### Manual Handling

##### I n t r o d u c t i o n

Work related injuries resulting in musculoskeletal disorders (MSDs) account for about half of all work related ill-health, many of these are caused by the poor management and practice of manual handling. The MHOR require employers to risk assess the transporting or supporting of a load including lifting, putting down, carrying, pushing, pulling, moving by hand or bodily force and introduce management controls to reduce the risk of injury to a level that is as low as is reasonably practicable.

##### R i s k As s e s s m e nt

Before carrying out any risk assessment of manual handling operations, first determine whether it is reasonably practicable to avoid manual handling entirely by referring to the flow chart in a subsequent page. If, following this initial risk assessment, manual handling is no longer required; there is no need to carry out any further manual handling assessment. If there is a requirement for manual handling then a risk assessment must be conducted.

##### Th e Ta s k

Does the task involve

* + - Holding loads at a distance from the body – this increases general stress on the lower back.
    - twisting of the trunk - stress on the lower back is increased significantly if such postures are adopted, even worse is to twist whilst supporting a load.
    - Stooping - this increases stress on lower back, either by bending or leaning forward with the back straight. To be avoided where possible.
    - Lifting above waist height or lowering below mid-thigh - excessive reaching upwards and downwards places additional strain on arms and back. Control of the load becomes more difficult and because arms are extended they are more prone to injury. Lifts beginning at floor level should be avoided where possible and should finish no higher than waist height.
    - Moving a load over excessive distances - large distances are more demanding than smaller ones. Moreover it is more likely to necessitate a change of grip part way, further increasing the risk of injury.
    - Excessive pushing or pulling of the load - the risk of injury is increased if pulling or pulling is carried out with the hands much below waist height or above shoulder height.
    - Repetitive handling - a small load handled very frequently can create as large a risk of injury as a one-off handling of a more substantial load. The effect will be worsened by jerky, hurried movements which can multiply the stress placed on the body.
    - Frequent or prolonged physical effort resulting in insufficient rest or recovery periods

- if physical stresses are prolonged during physically demanding work then fatigue will occur, and this increases the risk of injury. Consider rest breaks from task to allow recovery e.g. changing to another task, which uses a different set of muscles.

* + - Note: The guideline weights shown in figure 2 assumes the pace of work is not forced, there are adequate times to rest and the load is not held for any prolonged period of time. The weights suggested must be reduced if the operation is repeated more often.

##### I n d i vi d u a l C a p a b i l i t y

Does the task:

* + - Stretch the employee’s physical capabilities to the point of risking injury - In general the lifting strength of women as a group is less than that of men. To provide protection for working women, guidelines are usually reduced by a third (see figure 2). Individuals' physical capability varies with age normally peaking in the early 20s and declining thereafter becoming more significant from the mid-40s. Therefore the risk of injury may be higher for employees in their teens or in their 50s or 60s. Young persons (16-18) should be considered a significant risk and special consideration should be given towards that group.
    - Restrict the manual handling capability of an individual due to a previous history of a back, knee, hip condition, hernia or any other problem.
    - Require additional knowledge or training for the task to be carried out safely - The risk of injury will be increased where a worker does not have the information or training necessary for safe performance. Training should cover:
      * how to recognize the risk in manual handling
      * appropriate systems of work
      * use of mechanical aids
      * good handling techniques

##### Th e L o a d

Is the load:

* + - Heavy - consideration must be given to reducing the load and/or obtaining mechanical assistance. If this is not possible, then handling by two or more people may make possible an operation that is beyond the capability of one person, thus reducing the risk of injury to a solo operator. However, the load that a team can

handle in safety is less than the sum of loads that individual team members could cope with when working alone. One person should plan and take charge of the operation ensuring that the movements are coordinated. Team members should preferably be of broadly similar build and physical capability.

* + - Bulky/unwieldy - the shape of the load will affect the way that it can be held and can often make it harder to get a good grip:

#### If handlers have to lean away from a load to keep it off the ground they will be forced into unfavorable postures.

* + - * The bulk of the load can also interfere with vision, thus increasing the risk of slipping, tripping, falling or colliding with obstructions.
      * Should the center of gravity of the load not be central within the load, the risk of injury is increased.
    - Difficult to grasp - if load is difficult to grasp because it is rounded, smooth etc., its handling will call for extra grip strength which is tiring and will involve inadvertent changes of posture. There will also be a greater risk of dropping the load.
    - Unstable or contents likely to shift - if load is unstable because it lacks rigidity, the likelihood of injury is increased. The instability may impose sudden stresses for which the handler is not prepared.
    - Intrinsically harmful (e.g. sharp/hot) - risk of injury can arise from the external state of a load. Such characteristics may also impair grip, discourage good posture or otherwise interfere with safe handling.

##### Th e W o r k i n g E n vi r o n m e n t

Consider:

* + - Space constraints preventing good posture - if the working environment hinders working at a safe height or prevents good posture e.g. working in or moving through a narrow gap, the risk of injury from manual handling will be increased.
    - Uneven, slippery or unstable floors - in addition to increasing the likelihood of slips, trips and falls, uneven or slippery floors hinder smooth movement creating additional risk.
    - Variations in level of floors or work surfaces - the presence of steps, or slopes can increase the risk of injury.
    - Hot/cold conditions - high temperatures, high humidity or cold can cause rapid fatigue. Inappropriate gloves and other protective clothing, which may be required, can also hinder movement, impair dexterity and reduce grip.
    - Strong air movements - sudden air movements caused by a ventilation system or the wind can make large loads more difficult to manage safely.
    - Poor lighting conditions - dimness or glare may cause poor posture. Contrast between areas of bright light and deep shadow can aggravate tripping hazards and hinder the accurate judgment of height and distance.

##### O t h e r F a c t o r s

These may include:

* + - Clothing, footwear or personal protective equipment (PPE). Clothing, footwear and PPE must be adequate for the task being undertaken and allow free movement and posture for the manual handling process being undertaken.
    - Goods deliveries and dispatch. Supervisors/Site Manager should be aware of times, sizes of loads etc. The risk assessment should take into consideration events which may occur outside of the normal.

##### C o n t r o l M e a s u r e s

The manual handling operation regulation establishes a clear hierarchy of control measures. These are as follows:

* + - Avoid hazardous manual handling operations so far as is reasonably practicable by addressing the following questions:

#### Can the movement of the loads be eliminated altogether e.g. can the workplace or task be redesigned to avoid moving loads or could delivery be arranged to the point of use?

* + - * Can the operations be automated?
      * Can mechanical devices be used (e.g. trucks, barrows, rollers, handling aids, forklift trucks, sack trucks)?
    - Make a suitable and sufficient risk assessment of the risk of injury of any hazardous manual handling operations that cannot be avoided.
    - Reduce the risk of injury for operations so far as is reasonably practicable. This can be done by improvements to the task and load, (e.g. reduce the load size and/or distance travelled; consider a team load.)

##### R e c o m m e n d e d a c t i o n t o r e m o ve o r r e d u c e r i s k t o t h e l o w e s t p o s s i b l e l e ve l

If an item must be moved, the use of mechanical aids to eliminate the need for manual handling altogether should take primacy; if this option is not reasonably practicable then a review of the task should be undertaken to minimize the need for manual handling (e.g. reducing distance carried from point of delivery to end user).

Adequate information, instruction and training should be given in order to undertake the task safely. The type of training could comprise of a combination of the following:

* On the job training
* Tool box talks
* Task specific training
* Risk Assessment addressing

Reducing the size and or weight of the load and or the redesign of packaging to improve the ease of handling should be considered.

Improvements to the working environment should include the removal of obstructions, improvements to the flooring, lighting etc.

In some instances there will be resource or other implications (e.g. contractual), which prevent the immediate implementation of control measures. Therefore the short term, medium term and long term measures should be stated:

* Short-term measures may comprise stopping the activity, a briefing in safe lifting techniques, a removal of obstructions;
* Medium term measures could be the provision of mechanical handling aids;
* Longer term could be the relocation of the storage area due to a unit move or rebuild.

Supervisors and Site Managers are required to demonstrate that they have done all that is “reasonably practicable” in the circumstances to reduce risk, this may be demonstrated by raising any outstanding issues up through the correct Chain of Command.

**R e vi ew**

An initial review of the risk assessment and working practices should take place shortly after implementation, in order to check the effectiveness of any new control measures and validation of progress that has been made towards implementation of medium and long term controls.

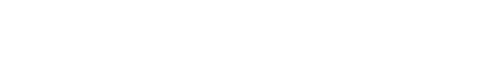
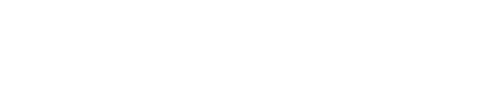
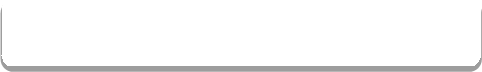
Subsequent reviews should be undertaken:

* When there has been a significant change in the task, procedure or technology.
* There is reason to suspect they are no longer valid, e.g. should an accident or incident occur.

|  |  |  |
| --- | --- | --- |
| Employee Age (Years) | Allowable Load Limits for Manual Lifting (Kg) | Remarks |
| 16-18 | 24 | Maximum load for women is 20 kg. |
| 18-20 | 30 |
| 20-35 | 32 |
| 35-50 | 26 |
| More than 50 | 20 |

Table 8 - Manual Handling

Maximum load weight under optimal conditions - General Safety Code on Construction Projects



No

Does the work involve manual handling

operations?

Yes

No

Is there a risk of Injury?

Yes/Possibly

Yes

Is it reasonably practicable to avoid

moving the loads?

No

Is it reasonably practicable to automate

or mechanise the operations?

Yes

No

No

Does some risk of manual

handling injury remain?

Yes/Possibly

Carry out Risk Assessment

Determine measures to reduce risk of

injury to the lowest level reasonably practicable

Implement the appropriate measures

Yes

Evaluate the effects

(Are the risks controlled as planned?)

No

End of initial exercise

Review if conditions

change significantly

Manual Handling Assessment

##### Noise at Work

An initial noise assessment should be carried out at the project startup. Noise monitoring to be carried hen new plant and machineries are introduced.

Maximum Limit at Area Averaged over 10 minutes

85dB (day and night)

Individuals exposed to construction noise levels of 85db (A) and above must wear suitable hearing protection. Task specific noise surveys will be conducted monthly. Findings of such surveys will be kept on record and made available for audit purposes.

##### N o i s e C o n t r o l

To ensure noise levels are minimized at the site during the aforementioned construction activities, the following mitigation measures will be implemented:

* + - Where Noise Sensitive Receptors (NSR) is identified, noise monitoring will be undertaken at the NSR and / or site boundary (after a compliant is received).
    - All equipment and plant to be used will be operated and maintained in accordance with manufacturer’s instructions for low noise operation;
    - Where fitted, engine covers, silencers, mufflers and other forms of acoustic linings will be used at all times;
    - All sensitive receptors will be screened from significant sources of noise, which may include the use of stockpiles and other such temporary structures as acoustic barriers;
    - Machinery and plant, including vehicles, that may be in intermittent use will be throttled down to a minimum or will be turned off between work periods; and
    - Vehicles and plant will be regularly inspected and maintained to ensure noise emissions are kept to a minimum, which will include lubricating moving parts, tightening loose parts and replacing worn out components.
    - Throughout the construction phase, operatives will be trained to keep noise to a minimum and they will be effectively supervised to use and maintain best practice noise and vibration control measures.

##### Alcohol Abuse at Work Place

All personnel on HIT controlled site comply with the Alcohol and Other Drugs Use Standard and procedures and sign to that effect during the induction process. Zero tolerance to substance on site in compliance to WAEL HSE requirements. If suspected, personnel shall be asked to stop work and subjected to test. If positive, the individual is subjected to HIT’s disciplinary procedure.

##### Smoke Free Workplace Policy

Employers have a duty of care under common law and Occupational Health and Safety Legislation to ensure the health, safety and welfare of all persons in areas they control. The risk of fire associated with smoking must be considered and controlled not only for health and safety reasons but also importantly for insurance purposes.

This policy procedure has been developed to assist in protecting the health and welfare of employees.

Contractors, who come into contact with <COMPANY NAME HERE> activities, must reflect legal obligations and should provide an appropriate level of support to employees who may have work related and or social issues pertaining to smoking. The smoke free policy / procedure apply to all workplaces under the control of Harlequin International (GH) limited.

##### Selection and Control of Subcontractors

<COMPANY NAME HERE> recognizes that subcontractors are a crucial part of our operation by providing a specialist and flexible addition to the workforce.

There are three main components of any policy to address the issue of the adequate control of contractors; these are identified as contract management, use of external contractors and internal teams who may provide a subcontractor service.

<COMPANY NAME HERE> aspires to best practice in managing the use of subcontractors. The expectation is that all its employees responsible for contractor and <COMPANY NAME HERE> management need to:

* + - Select subcontractors with health and safety performance as a significant criterion.
    - Determine the key facts, such as the contractor’s experience, health and safety policy and practice, training and skills, trade or professional memberships and supervision arrangements, so that all evidence confirms the contractor’s suitability for the work task.
    - Specify the health and safety requirements in the contract.

Cooperation is needed to make sure all parties can meet their obligations and good communications on health and safety matters is essential for safe working by contractors and adverse impacts on other site activities. The work carried out by the contractor may be such as to bring in new or additional risks into the employer’s workplace and hence appropriate controls need to be implemented to ensure no harm results to the subcontractors or the employees. Conversely, the subcontractor’s employees may not be familiar with site operations and may be exposed to risks that they might not expect.

##### Subcontractor OHS Management

<COMPANY NAME HERE> shall ensure systems are in place to monitor and review subcontractors performance and compliance with the health and safety obligations specified in the contracts.

Prior to commencement on site, <COMPANY NAME HERE> ensure sub-contractors appointed competed HSE staff at site. Subcontractors will be provided with Subcontractor’s OHS requirements (Hand-out) to assist in their development of their health and safety documentation.

Subcontractor Safety Plans and Safe Work Method Statements will be submitted to <COMPANY NAME HERE> prior to the commencement of work on project and reviewed and accepted by <COMPANY NAME HERE> in consultation with the subcontractor representative.

Where a subcontractor is unable to provide <COMPANY NAME HERE> with an acceptable management documentation detailing systematic management controls for occupational health and safety, <COMPANY NAME HERE> shall, where considered appropriate, provide assistance to the subcontractor.

Monitoring of work activities will be undertaken by <COMPANY NAME HERE> to establish that subcontractors are carrying out work in accordance with the OHS documentation provided <COMPANY NAME HERE>. Monitoring may be achieved by one or more of the following:

* + - On-going visual inspections by supervisors;
    - Safety Representative inspections;
    - On site verification of compliance directly against a subcontractors SWMS;
    - Subcontractor audits;
    - Task observation programs;

##### Consultation and Communication

<COMPANY NAME HERE> shall ensure meaningful and effective consultation and communication processes are established and maintained throughout the life of the project.

Employees and subcontractors shall be consulted in regard to the hazards and risks that have the potential to impact on their health and safety and in particular the work activities they are to undertake including any changes to the scope of that work. Consultation and communication on health and safety matters will occur through the following mechanisms:

|  |  |  |  |
| --- | --- | --- | --- |
| Event | Frequency/Requirement nt | Participants | Record/Evidence |
| Project specific induction | Prior to commencement of contracted work | All personnel | HSE Induction, Site Registration and Induction Training Manual |
| Work activity Induction (in R.A. or equivalent) | Prior to commencing any building/construction work | Personnel carrying out specific work activities | Record of training – listed on the R.A// Toolbox Talk Record  / RA Addressing |
| Toolbox Meetings | Daily | Supervisors and their employees including contractors, their employees and service providers | Toolbox Talk /Safety Awareness Talk / Risk Addressing / RA Addressing |
| HSE Subcontractor Meetings | Weekly | Project team/ contractors, their employees, and others as required | Minutes of meeting |
| Project team meetings | Weekly | Project team | Minutes of meeting |
| HSE Committee Meeting | at least 4 times a year | <COMPANY NAME HERE> Management Rep / Employee & other HSE representatives | Minutes of meeting |
| HSE Report | Monthly | Project HSE team, SHEQ Department, Senior Management | Monthly HSE Statistics |
| Project notice board and general signage | As required | All personnel | Project Notice board. |
| Site inspections and audits | As per schedule | As per schedule | Inspection and audit reports |

Consultation and Communication Matrix

##### Site Inspections

The Project shall ensure that regular health and safety inspections are undertaken of all work activities being carried out at the project and shall include the following:

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Inspection** | **Inspection By** | **Frequency** | **Record** |
| Hazard Inspection of work areas | Safety Officer | Daily, Weekly | Hazard inspection report |
| Workplace Inspection with subcontractor’s safety representative | Safety Officer | Weekly | inspection report |
| Health and Safety on- going implementation assessment | QHSE Manager | Monthly | HSE on-going implementation assessment report |
| SWMS monitoring | QHSE Manager/ Safety Officer | Quarterly | Audit Reports |
| Plant compliance | Safety Officer | As per schedule | Plant compliance checklist |

Site Inspections Matrix

##### Control of Non-Conformances

Deficiencies identified during audits and site inspection will be generally recorded on the audit report or inspection report / checklist and auctioned. In the event of a non- conformance being raised, <COMPANY NAME HERE> shall be documented on the Safety Non - Conformity Report.

When non-compliance is identified, the recipient and/or <COMPANY NAME HERE> shall identify strategies in order to rectify the non-conformance. Where appropriate, the recipient and/or <COMPANY NAME HERE> shall also develop measures to prevent recurrence of the non- conformance. The measures to rectify and to prevent recurrence of the non-conformance shall be documented on the Safety Non-Conformity Report and a time frame established. The instigator shall carry out a follow up review and closeout of the Non-Conformance Report to verify completion of measures taken to rectify and to prevent recurrence of the Non-Conformance within the specified time frame.

##### Grievance and Disciplinary

Any personnel willfully found violating or ignoring the site safety rules and organizational procedures shall be subject to the Company’s Grievance & Disciplinary Procedure. It is the Company's aim to encourage improvement of individual employee's conduct and performance, and this procedure is part of that process. It applies to all employees and forms part of their contract of employment.

The procedure is designed to establish the facts quickly and deal consistently with disciplinary issues. No disciplinary action will be taken until the matter has been fully investigated and a disciplinary hearing has taken place.

At any disciplinary or appeal hearing employees will be given details of any complaint against them and relevant evidence and will have the opportunity to state their case and may be accompanied by another employee of the Company.

No disciplinary action will be taken until the employee has had the opportunity to explain any mitigating circumstances.

An employee has the right to appeal against any disciplinary penalty or action taken. If after an investigation and disciplinary hearing it is decided that disciplinary action may be appropriate the following steps will be taken:

Except for the cases of employees under the influence of Alcohol or drugs on site, or caught smoking in a construction are, where the employee will be immediately banned from the project.

The Company reserves the right to commence the procedure at stages 2, 3, or 4 in cases where it is considered appropriate to do so.

* + - **Stage 1**: Oral Warning If an employee's conduct or performance is found to be unsatisfactory; the employee will be given a formal oral warning, which will be recorded. An oral warning will remain effective for 12 months.
    - **Stage 2**: Written Warning If the first offence is serious, a further offence is committed after an oral warning, or if there is no improvement in the standard of work, a written warning will be given. The warning will include the reason for the warning and state

that if there is further misconduct or no improvement in performance a final warning will be given.

* + - **Stage 3**: Final Written Warning If the first offence is sufficiently serious, or if the conduct or performance remains unsatisfactory after a written warning, a final written warning will be given. The warning will include the reason for the warning and state that if there is any further misconduct or no improvement in performance the employee may be dismissed. A final written warning will remain effective for 18 months.
    - **Stage 4**: Dismissal if there is no satisfactory improvement or if further misconduct occurs, the employee will normally be dismissed. If after investigation it is confirmed that an employee has committed an offence of gross misconduct, serious breach of duty, or conduct that brings the organization into disrepute, then the normal consequences will be summary dismissal without notice. Alternatives short of dismissal may be considered at the discretion of the Company are: suspension without pay for a specified period; demotion to a more suitable job, if available and appropriate.

##### Training and Competency C o m p e t e n c y

<COMPANY NAME HERE> has defined HSE competencies for management, supervisors and workers. HSE competency requirements are dependent on role and responsibilities. All those involved in frontline management and supervision are expected to have base competencies in legislative requirements and hazard and risk management.

##### Tr a i n i n g N e e d s

Particular health and safety training needs including any unforeseen workforce requirements are identified on an on-going basis through the health and safety risk workshops, training matrix and monitoring of work activities. The training matrix is developed and reviewed to identify any gaps in training, both in terms of who is receiving what training, and any additional issues requiring communication. A record of all provided training shall be kept. This may be in the form of tool box meeting minutes, formal training records or a diary note.

##### C h a n g e s

When employees are promoted or placed in supervisory/management positions during the course of a project, the Manager will consult with the Project HSE Manager or Corporate HSE Manager to review the skills matrix and determine their minimum required competency for the new role.

Training if required shall be provided at the earliest opportunity to ensure that they meet the role’s competency requirements.

Where training cannot be immediately delivered, additional supervision and management shall be provided to ensure that the employee and other workers are not placed at risk.

##### S t a f f Tr a i n i n g

It is recognized that an important part of safety management is leadership and supervision and as such all levels of management and supervision will participate in a safety training program based on their role and training needs.

##### B e h a vi o u r B a s e d S a f e t y S ys t e m

Implementation of BBS system may be ensured on the project through monitoring and coaching <COMPANY NAME HERE> employees. Monitoring of the BBS will be by means of job observations, these observations will be recorded and the data from that will be logged and used for trend analysis. <COMPANY NAME HERE> Project HSE Manager will manage and control the BBS on the project. Coaching and training will be the key factor of BBS.

##### D r i v e r Tr a i n i n g

All personnel required to drive must be competent and have a valid licence for that class of vehicle.

<COMPANY NAME HERE> Logistics Manager will monitor and control all mobile plant and machinery, copies of all drivers licenses and third party certification will be kept on record for audit purpose.

##### M o b i l e P l a n t Tr a i n i n g

All personnel required operating mobile plant on site including; excavators, cranes, forklifts, bobcat etc. must be competent and have a valid certificate of training for that class of plant.

Competency of all mobile plant operators will be verified by the Logistics Manager and Project HSE Manager.

##### L i f t i n g O p e r a t i o n s

All persons involved in planning, supervising and carrying out Lifting Operations must be competent and must have completed certificated training for their specific role and responsibilities.

All lifting operations will be done under the supervision of a competent foreman. All lifts 10t or more will only be done once a Lift Plan had been completed and approved. All lift plans will be done by the designated Appointed Person.

##### F i r s t Ai d Tr a i n i n g

Sufficient Numbers of trained First Aiders shall be ensured by <COMPANY NAME HERE> and relevant subcontractors.

##### F i r e Aw a r e n e s s

All personnel must have completed basic Fire Awareness Training and an adequate number must have received Fire Fighting, Fire Watchman / Fire Marshal Training.

##### W o r k i n g a t H e i g h t

All persons required to work at height must be competent and must have completed training relevant to the tasks being carried out including use and inspection of access equipment and fall prevention measures, correct use of safety harnesses and lanyard and, if appropriate, rescue procedures.

##### G e n e r a l C o m p e t e n c y a n d Tr a i n i n g

Competence must be demonstrable for an individual’s core skill / trade or occupation, as well as any safety critical operations that the individual may carry out. For example, a tradesman would require appropriate skills for his core competency, but may also require evidence of competency for using a mobile elevating work platform or erecting a mobile tower scaffold.

In addition to the above, all Site Managers and Supervisors shall:

* + - Have received supervisory and presentation skills training as well as HSE training;
    - Understand their own Company policies and procedures as they relate to the works.
    - Be capable of preparing and giving instructions to operatives that clearly explain the
    - hazards and precautions associated with the work being undertaken;
    - Be trained to ensure the correct response to hazards identified by themselves or
    - others;
    - Understand the types of accidents and occupational ill health that occur industry- wide with good knowledge of accidents and hazards in their own particular work activity.
    - Have an understanding of how a behavioral approach can deliver additional improvements to HSE performance for the benefit of all and the important part they have to play as an this process as a Site Manager or Supervisor.

##### Tr a i n i n g R e c o r d s

Training records shall be filed in <COMPANY NAME HERE>HSE Department in the form of register, certificates and/or attendance. Records could be made available to the Project Director, PMC and local authorities upon request.

##### Personal Protective Equipment

##### H a z a r d As s e s s m e n t

<COMPANY NAME HERE>HSE department and subcontractors will carry out RA to identify the tasks for which PPE is required. If the RA indicates that additional PPEs are necessary, Project Senior HSE Manager selects the specific PPE. RA conducted is updated for PPE under the following circumstances:

* + - When a job changes
    - When new equipment or process is introduced
    - When an accident has occurred
    - When a supervisor or employee requests it
    - Legal requirement

##### E q u i p m e n t S e l e c t i o n

Once the hazard assessment has been conducted the supervisor needs to select the appropriate P.P.E. for the hazard. If we do not have the appropriate P.P.E. in house, the safety department will contact the appropriate representative to provide the correct P.P.E.

* + - Select the types of P.P.E. that will protect the affected employee from the hazards identified in the assessment.
    - Communicate the selection decision to each employee.
    - Select the appropriate P.P.E. that properly fits each affected employee.
    - Once the correct P.P.E. has been purchased, the supervisor will be responsible for communicating the proper use, maintenance and disposal of the P.P.E.
    - The Hazard Assessment and selection of the P.P.E. is to be documented and certified.
    - Project Senior HSE Manager selects the appropriate PPE for each potential hazard presented in RA. The Project Manager and Construction Manager assist in determining the appropriate PPE and ensure that it is provided to the employees.
    - Project Senior HSE Manager should be aware of the types of PPE available and the levels of protection offered. Selection tools for determining appropriate PPE for the task include:
* Chemical resistance selection chart for protective gloves
* Safety helmet quality standards
* Filter lenses for welding
* Eye and face protector
* Safety shoes standards
* Safety harness standards
  + - The selection of the appropriate PPE is based on an evaluation of the performance characteristics of the PPE relative to the task, conditions present, duration of use, and potential hazards identified.
    - PPE should not interfere with the employee work or create additional hazards like fogged lenses, trip hazard, and loose materials.
    - All PPE must be of safe design and construction for the work to be performed.
    - Where feasible, PPE should provide a level of protection greater than the minimum required to protect employees from the hazards.
    - If different types of PPE are worn together, they must be compatible.
    - Consider the fit and comfort of the PPE when selecting appropriate items to encourage the employee use of PPE.
    - Multiple styles and sizes of PPE are available to accommodate employees. Select size-adjustable PPE when available.
    - Consider the chemical resistance properties of the PPE material.

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##### Tr a i n i n g

* + - <COMPANY NAME HERE> will provide training to employees, visitors on safe use of PPE.
    - Subcontractors must train their own employees regarding safe PPE usage and limitation.
    - Appropriate signage will be displayed in all areas where PPE is required
    - Supervisors and HSE team are responsible for identifying additional employee training needs. As a minimum, each employee is trained on the following topics:
* Why PPE is necessary
* What PPE is necessary
* How to properly adjust, and wear PPE
* Limitations of the PPE
* Proper care, maintenance, useful life, and disposal of the PPE
  + - When there is reason to believe that an employee who has already been trained does not have the understanding and skill required, the employee is retrained. Retraining is required under the following circumstances:
* Changes in the workplace that render previous training obsolete
* Changes in the type of PPE to be used that render previous training obsolete
* Inadequacies in an affected employee’s knowledge or use of assigned PPE
  + - The supervisors shall verify that each affected employee has received and understood the required training through a written certification that contains the name of each employee trained, the date(s) of the training and identifies the record.



##### W h y P . P . E . a n d i t s r e q u i r e m e n t s

Hazards and workplace injuries exist in different form: sharp edges, falling objects, chemicals, flying sparks, noise, puncture and myriad and other potential dangerous situations where it requires employers to protect their employees from workplace hazards that can cause injury hazards and that cannot be eliminated.

Legislations and regulations have placed P.P.E. in a hierarchical system of control measures to minimize exposure to health risk. P.P.E. protects only the person wearing it, whereas measures controlling the risk at source can protect everyone at work place. Theoretical levels of protection are seldom achieved in practice and actual protection is quite difficult to assess. Affective protection is only achieved by P.P.E. if it is suitable, correctly fitted, adequately maintained, stored and used correctly.

It is also possible to apply engineering control measures immediately. A reliance on P.P.E. is essential for short or long term use. P.P.E. needs to be underpinned by a system to ensure:

* + - Correct selection
    - Correct fitting
    - Maintenance and storage
    - Training
    - Usage
    - Monitoring of usage and checks (inspections)

##### W h e n P . P . E . t o b e u s e d

P.P.E. is used to reduce or minimize the exposure from hazards. A complete survey of risk assessment or hazard assessment must be completed prior to organize and analyse proper type of P.P.E. for the activity. The risk assessment should identify hazards in following basic categories.

* + - Impact
    - Penetration
    - Compression (roll over)
    - Chemical
    - Biological
    - Heat/cold
    - Harmful dust
    - Light (optical) radiation
    - Noise exposure
    - Fall
    - Source of Electricity

Whatever P.P.E. is chosen, it must be remembered that some types of equipment can provide high level of protection. None will provide complete protection. Some consideration and indication is needed in the level of risk so that the performance of the requirement can be achieved.

|  |  |
| --- | --- |
| **Safety Helmet /Hi Vis Vest Colour Code (Every Helmet should have the LOGO and HSE Induction sticker affixed)** | **Person to use** |
| White Helmet | Project Management Staff, Contractors site Staff, Engineers, Site Supervisors/Foremen, and Security Guards |
| Red Helmet | Safety Professionals (Both Contractor and Sub-Contractor) |
| Yellow Helmet | All workforce |
| Blue Helmet | All MEP Contractor’s workers including Contractor’s site maintenance electricians, plumbers and other technical workers |
| Green Helmet | Banksman, Riggers, traffic controllers, Operators |
| White Helmet (with ‘VISITOR’ sticker) | Visitors |
| Yellow hi visibility vest | For all Employees/Workers/Visitors |

##### S t a n d a r d C o m p l i a n c e

Personal Protective Equipment must be compliance to relevant British Standards, European Norms and ANSI standards. When selecting new product only those with a C E mark is suitable, use P.P.E. only with declaration of conformity by the relevant authority.

Personal Protective Equipment listed in table 5 is mandatory requirement and compliance to the following matrix shall be ensured.

|  |  |  |  |
| --- | --- | --- | --- |
| **Mandatory P.P.E.** | **Ref No** | **Standard Compliance** | **Activity** |
| Head Protection | 1 |  | |
| Safety Helmet and hard hats | 1.1 | BS EN 397:1995 | General Construction Activity |
| Eye Protection | 2 |  | |
| Safety goggles and spectacles | 2.1 | BS EN 168:2002 | Gas welding, welding |
| Equipment for eye and face protection | 2.2 | BS EN 175:1997 | Welding and allied processes |
| Personal eye and face protection devices | 2.3 | ANSI Z87.1-2003 | Welding, Face shield |
| Hand Protection | 3 |  | |
| Protective Gloves | 3.1 | BS EN 420:2003 | Required for specific works |
| Gloves of insulating material | 3.2 | BS EN 60903:2003 |  |
| Foot Protection | 4 |  | |
| Safety Footwear | 4.1 | BS EN ISO 20345:2004 | General Site Use |
| Safety Footwear | 4.2 | BS EN 345-1:1993 | General Site Use |
| Safety Footwear | 4.3 | BS EN 345-2:1997 | General Site Use |
| Respiratory Protective Equipment | 5 |  | |
| Full Face Masks | 5.1 | BS EN 136:1998 | As per MSDS requirement |
| Clothing (Body Protection) | 6 |  | |
| Full Body Harness | 6.1 | BS EN 361:2002 | Working on height |
| PPE against falls from a height | 6.2 | BS EN 365:2004 | Working on height |
| PPE against falls from a height | 6.3 | BS EN 355:2002 | Energy Absorbers |
| Belts, lanyards | 6.4 | BS EN 358:2000 | Working on height (work positioning and restraint) |
| Retractable type fall arresters | 6.5 | BS EN 360:2002 | Fall protection |
| Connectors | 6.6 | BS EN 362:2004 | Connectors for harness and fall protection |
| Noise Protection | 7 |  | |
| Ear-Muffs | 7.1 | BS EN 352-1:2002 | G.R. (Drilling grinding) and as per manufacturer’s  requirements |
| Ear-Plugs | 7.2 | BS EN 352-2:2002 | G.R. (Drilling grinding) and as per manufacturer’s  requirements |

Personnel Protective Equipment Compliance Matrix

##### S l i p s , Tr i p s a n d F a l l s

People slip and fall because of one or more of the following causes:

* + - Traction robbing substances on the floor surface, such as water, oil, grease, sand, mud, ice and other substances.
    - Flooring offers too little traction, such as metal floor worn smooth from abrasive traffic, or smooth finished concrete.
    - Traction robbing condition associated with shoes, such as hard leather heels, metal heel plates, worn heels, slippery substances on soles or heels.
    - Another factor in slipping in falling is the individual is not watching where he or she is going. In other words, not paying attention.

These factors present us with some hazard recognition and prevention techniques, such as inspecting walkways and floor surfaces regularly. Check daily for slip and fall hazards. Be alert for drips or spills from oil, grease, liquids, water and slippery granular material. Promptly correct any noted hazard since delay exposes more people to the hazard. Don't forget to correct the source of the hazard. Whenever possible, use non- skid flooring. Floor areas subject to accumulations of slippery substances should be frequently cleaned or have some type of non-skid flooring installed.

All employees have an obligation to report hazards to their supervisor, if a problem can't be corrected immediately. Certainly, wearing appropriate footwear is one of the best prevention methods. Metal heel plates on heels of shoes and boots can be hazardous when walking on rigid surfaces, such as wood or metal.

Make sure walkways and other frequently used floor areas are adequately illuminated. Replace burned out lights and correct dark shadow-casting conditions. Everyone needs to see where they're going, so make sure dark areas are well lit. Tripping hazards pose special problems, so it takes special effort to reduce these hazards. Floor conditions or objects on floors that present an obstacle to foot movement are considered tripping hazards. Tripping hazards include cables, ropes, tools, boxes, lumber, legs of equipment, and faulty flooring. Many such obstacles result from poor housekeeping. Here are some tips to help prevent tripping hazards.

* + - Be sure there are adequate storage facilities. When items are scattered around, or stored improperly, this indicates a lack of storage facilities or persons are not

properly storing their equipment, tools and other items. Poor housekeeping is one of the major causes of tripping hazards.

* + - Cleaning and disposal equipment can significantly improve housekeeping, so make sure there is adequate cleaning and disposal equipment to maintain good housekeeping. Maintain as you go, is a good policy.
    - Overhead instead of underfoot, is an old saying on jobsites. Basically it means to run cables, hoses, ropes and wires overhead instead of along the floor. Where such items must be run on the floor, it should be straight, flat and shielded or marked for easy identification. Portable warning signs and blinker lights are useful to attract attention to such tripping hazards.
    - Inspect floor surfaces frequently. Regular daily inspections of walkways and working areas are necessary and to correct any deficiencies found during these inspections.
    - Of course, tripping prevention wouldn't be complete without housekeeping. Good housekeeping means establishing a place for everything, such as tools, materials, portable equipment, waste, scrap and seeing to it that everything is kept in its proper place when not in use.

Working at or around ground or floor openings could be a person falling down an elevator shaft or falling through a floor opening. Let's take a look at some potential problems and what you can do about them. When you're working on ladders, platforms, scaffolding or on permanent structures, be sure to use proper procedures and caution;

* + - Make sure the equipment used was erected safely. Ladders in particular should be at the proper angle, with firm footing.
    - Don't use defective equipment. Ladders, structural members of wooden staging and so on. Inspect before you use the equipment.
    - When using scaffolds, make sure there are guardrails to prevent falls.
    - Work safely and with caution, as there may be tripping or slipping hazards on structures or flooring surfaces.
    - Use safety harnesses and lanyard or nets when working above ground, when not protected from falls by the use of guardrails.
    - Guard openings or barricade where necessary to keep persons from falling through the opening. Use warning devices, such as signs or lights. Temporary floor or ground openings should never be left unattended, unless marked with suitable warning devices. Keep in mind, however, that warning signs and lights are no permanent substitute for barricades.

##### Fire Risk Assessment

A fire risk assessment will help you determine the likelihood of a fire occurring and the consequences from fire that your workplace poses for the people which use it. The assessment method shares the same approach as that used in general health and safety legislation and can be carried out either as part of a more general risk assessment or as a separate exercise.

With fire risk assessment there are five steps that need to be considered:

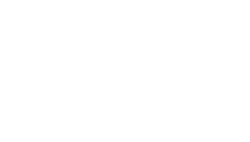
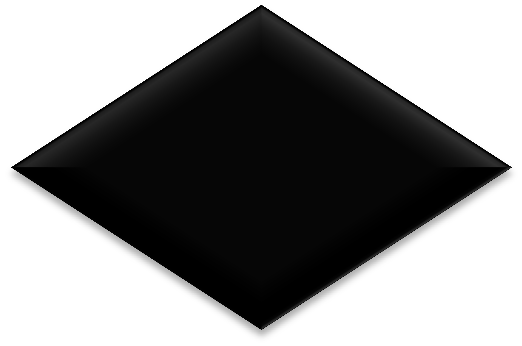
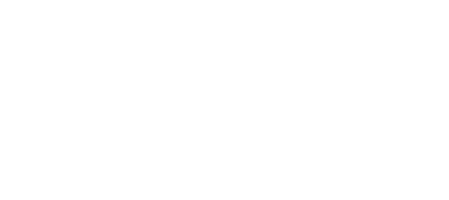
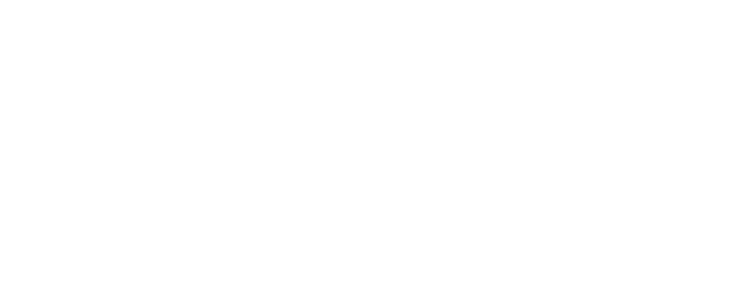
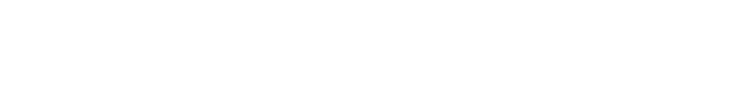
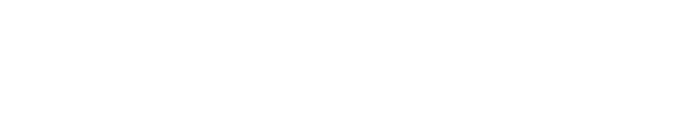
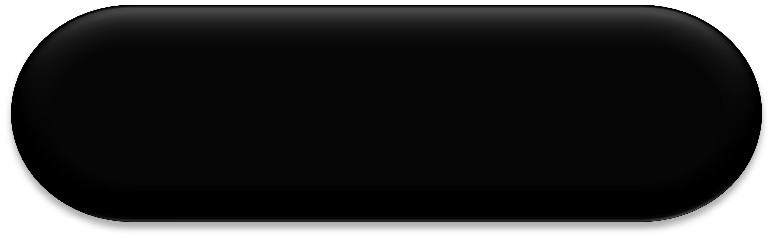
Step 1 Identify potential fire hazards in the workplace.

Step 2 Decide who (e.g. employees, visitors’) might be in danger.

Step 3 Evaluate the risks arising from the hazards and decide whether existing fire precautions area adequate or where more should be done to get rid of the hazard or to control the risks (e.g. by improving the fire precautions).

Step 4 Record findings and details of the action taken as a result.

Step 5 Keep the assessment under review and revise it when necessary.



**Identity Fire Hazard**

* Sources of Ignition
* Sources of Fuel
* Work Processes

Identity the Location of People at Significant Risk in

Case of Fire

**Evaluate the Risk**

Are the Existing Fire Safety Measures Adequate?

* Control of Ignition Sources / Sources of Fuel
* Fire Detection / Warning
* Means of Escape
* Maintenance and Testing of Fire Precautions
* Fire Safety Training of Employees

**Record Findings and Action**

**Taken**

Prepare Emergency Plan, Inform Instruct and Train Employees in Fire Protections

**Keep**

**Assessment Under Review**

Revise if Situation

Once your assessment has been completed and your fire precautions are in place, record details of maintenance and testing work carried out on them shall be maintained. Details of the instruction and training shall be recorded; they also show the relevant enforcing authorities that actions have been taken to comply with legal requirement. On completion of the assessment, a fire drill will be organized on site every 6 months. Following must adhere to:

* + - The date of the training or fire drill
    - Duration of training
    - Fire drill evacuation timings
    - Name of person giving instruction
    - Names of people receiving instructions
    - The nature of the instruction or fire drill
    - Any observations/remedial action

##### I n f o r m a t i o n a n d i n s t r u c t i o n s f o r e m p l o ye e s / s i t e p e r s o n n e l ’ s

It is important that employees know how to prevent fires and what they should do if a fire occurs. Employees should be given all information about the fire precautions in the work- place and what to do in the event of a fire. We need to ensure that it includes employees working in the premises outside normal hours, such as cleaners or shift workers.

In project specific inductions, all employees should be given information about fire prior to commencement of works.

* + - The location and use of the escape routes from where they are working.
    - The location, operation and meaning of the fire warning system.

Fire Action Notices must be posted in key locations throughout the workplace. However, they are not a substitute for formal training.

##### S t o r a g e a n d u s e o f f l a m m a b l e m a t e r i a l s

Workplaces in which large amounts of flammable materials are displayed, stored or used can present a greater hazard than those where the amount kept is small.

##### W h e r e ve r p o s s i b l e

* + - Quantities of Flammable materials will be reduced to the smallest amount necessary for running the business and kept away from escape routes.
    - Employees who use flammable materials will be properly trained & instructed in their safe storage, handling and use; and (permit will be issued of storage of flammable gas/Liquids).
    - Stocks of office stationery and supplies and flammable cleaners’ materials should be kept in separate cupboards or stores. If they open onto a corridor or stairway escape route, they should be fire-resisting with a lockable or self-closing fire door.

##### F l a m m a b l e l i q u i d s

Flammable liquids can present a significant risk of fire. Vapours evolved are usually heavier than air and can travel long distances, and are more likely to reach a source of ignition. Liquid leaks and evolution of vapours can be caused by faulty storage (bulk and containers), plant and process, design installation, maintenance or use. Ignition of the vapours from flammable liquids remains a possibility until the concentration of the vapour in the air has reduced to a level which will not support combustion.

* + - Bin or cabinet fitted with no means to contain any leaks.
    - Flammable liquids should not be dispensed within the store. Dispensing should take place in a well-ventilated area set aside for this purpose, with appropriate facilities to contain and clear up any spillage.
    - Container lids should always be replaced after use, and no container should ever be opened in such a ways that it cannot be safely resealed.
    - Flammable liquids should be stored and handled in well ventilated conditions. Where necessary, additional exhaust ventilation should be provided to reduce the level of vapour concentration in the air.
    - Storage containers should be kept covered and proprietary safety containers with self-closing lids should be used for dispensing and applying small quantities of flammable liquids.
    - Rags and cloths which have been used to mop up or apply flammable liquids should be disposed of in metal containers with well-fitting lids and removed from the workplace at the end of each shift or working day.
    - There should be no potential ignition sources in areas where flammable liquids are used or stored and flammable concentrations of vapour may be present at any time. Any electrical equipment used in these areas, including fire alarm and emergency lighting systems, needs to be suitable for use in flammable atmospheres.

##### F l a m m a b l e r u b b i s h a n d w a s t e

* + - Flammable rubbish and waste should not be stored on site, even as a temporary measure, especially in escape routes such as corridors, stair ways or lobbies, or where it can come into contact with potential sources of heat. Accumulations of flammable rubbish and waste in the workplace should be avoided, removed at least daily and suitably stored away from the building.
    - Do not allow flammable waste, unused materials, and redundant packaging, such as cardboard, wooden or plastic containers and wooden pallets, to build up at the workplace. Remove immediately from the site. Where a skip is provided for the collection of debris or rubbish, it should be positioned so that a fire will not put the workplace, or any other structure, at risk.
    - Parts of the workplace which are not normally occupied, such as basements, hi store rooms and any area where a fire could grow unnoticed should be regularly inspected and cleared of non-essential flammable materials and substances. Protect such areas against entry by unauthorized people.

##### F i r e d e t e c t i o n a n d w a r n i n g

* + - A fire in your workplace must be detected quickly and a warning be given so that people can escape safely. Early discovery and warning will increase the time available for escape and enable people to evacuate safely before the fire takes hold and blocks escape routes or makes escape difficult.
    - The nature and extent of the fire detection and warning arrangements in your workplace will need to satisfy the requirements indicated by your risk assessment.

##### F i r e d e t e c t i o n

All workplaces should have arrangements for detecting fire. During working hours, fires are often detected through observation or smell, and for many workplaces automatic fire detection equipment may not be needed.

However, we need to think about any parts of the workplace where a fire could start and spread undetected. This could be a storage area or a basement that is not visited on a regular basis or a part of the workplace that has been temporarily vacated, for example at mealtimes. Fires that start and develop unnoticed can pose a serious danger to people in the workplace.

Wet riser with fire hose reels will be installed on finished level whilst construction is being done.

##### F i r e w a r n i n g

In workplaces that are only small buildings or small open areas, the means of raising the alarm may be simple. For instance, where all employees work near to each other, a shouted warning ‘Fire!’ by the person discovering the fire may be all that is needed. But you will need to be satisfied that the warning can be heard and understood throughout the workplace, including the toilets.

In a suitable electrically operated fire warning system, with manual call points positioned both on exit routes and adjacent to final exits, should be installed. This should have sufficient sounders for the warning to be clearly heard throughout the workplace. The sound used as a fire warning should be distinct from other sounds in the workplace and, where background noise levels are high or an employee has a hearing impairment. It may also be necessary to install a visual alarm such as a distinctive flash or rotating light.

##### M e a n s o f e s c a p e i n c a s e o f f i r e

The principle on which means of escape provisions are based on, is the time available for escape (an assessment of the Length of time between the fire starting and the means of escape from the workplace) is greater than the time needed for escape (the length of time it will take everyone to evacuate once a fire has been discovered and warning given).

Regardless of the location of a fire, once people are aware of it they should be able to proceed safely along a recognizable escape route, to a place of safety.

The means of escape is likely to be satisfactory if your workplace is fairly modern and has had building regulation approval or if it has been found satisfactory following a recent inspection by the fire authority (and in each case not carried out any significant material or structural alterations or made any change to the use of the workplace). However, you should still carry out a risk assessment to ensure that the means of escape remains adequate.

When assessing the adequacy of the means of escape you will need to take into account:

* + - The size of the workplace, its construction, layout, contents and the number and width of the available escape routes.
    - The workplace activity, where people may be situated in the workplace and what they may be doing when a fire occurs.
    - The number of people who may be present, and their familiarity with the workplace.
    - Their ability to escape without assistance.

##### E va c u a t i n g t h e w o r kp l a c e

An Emergency Management Plan has been developed for the Project detailing the procedures required to ensure that adequate emergency response systems are developed, maintained and tested in accordance with <COMPANY NAME HERE>and regulatory requirements.

Relevant details of the Emergency Management Plan shall be provided to all personnel during the site induction and information posted on notice boards.

##### E s c a p e r o u t e s

Routes which provide means of escape in one direction only (from a dead-end) should be avoided wherever possible as this could mean that people have to move towards a fire in order to escape.

Each escape route should be independent of any other and arranged so that people can move away from a fire in order to escape.

Escape routes should always lead to a safe place. They should also be wide enough for the number of occupants and should not normally reduce in width.

Escape routes and exits should be available for use and kept clear of obstruction at all times.

##### F i r e d o o r s

Where fire doors are provided they should be fitted with effective self-closing devices and labelled ‘Fire Door’. Fire doors to cupboards and service ducts need not be self-closing, provided they are kept locked and labelled ‘—Fire Door — Keep Locked Shut’.

Signs should meet the requirements of British Standard - (BS 5499)

Self-closing fire doors may be held open by automatic door release mechanism.

##### E m e r g e n c y e s c a p e a n d f i r e e x i t s i g n s

Emergency escape routes and exit doors that are not in common use should be clearly indicated, as appropriate, by suitable signs. However, in certain circumstances, such as place of public assembly, you should indicate all exit doors. All signs should be in positions where they can be seen clearly. These signs must take the form of a pictogram which may incorporate a directional arrow. The sign can also be supplemented by works such as ‘Fire Exit’.

##### L i g h t i n g o f e s c a p e r o u t e s

All escape routes, including external ones, must have sufficient lighting for people to see their way out safely. Emergency escape lighting may be needed if areas of the workplace are without natural daylight or are used at night.

Before providing emergency escape lighting, check the relevant parts of the workplace with the lights off to see whether there is sufficient borrowed light from other sources to illuminate the escape route, e.g. street lights or unaffected lighting circuits. Where you decide there is insufficient light, you will need to provide some form of emergency lighting.

Emergency lighting needs to function not only on the complete failure of the normal lighting, but also on a localized failure if present.

Emergency escape lighting should:

* + - Indicate the escape routes clearly.
    - Provide illumination along escape routes to allow safe movement towards the final exits.
    - Ensure that fire alarm call points and fire-fighting equipment can be readily located.

In addition to emergency escape lighting, it may be necessary to provide other forms of emergency lighting for safety reasons.

Emergency lighting units should be sited to cover specific areas:

* + - Intersections at corridors.
    - At each exit door.
    - Near each staircase so that each flight of stairs receives direct light.
    - Close to a change in floor level.
    - Outside each final exit
    - At exits that are required elsewhere.
    - Within lifts
    - Near fire-fighting equipment.
    - Near each fire alarm call point.

The lighting units should be placed as low as possible but at least 2 meters above floor level (measured to the underside of the lighting unit). You may need to consider alternative mounting arrangements in areas where smoke could accumulate and make the lighting ineffective.

Where it is considered an electrical emergency lighting system is required. The system should be installed in accordance with British Standard 5266: Part 1. You should seek the advice of a competent person who specializes in the installation of these systems.

##### F i r e - F i g h t i n g E q u i p m e n t

Portable fire extinguishers enable trained people to tackle a fire in its early stages, if they can do so without putting themselves in danger.

All workplaces should be provided with means of fighting fire in the premises. When you are deciding on the types of extinguishers, you should consider the nature of the materials likely to be found in your workplace.

Class A Fire involving solid materials where combustion normally takes place with the formation of glowing embers.

Class B Fires involving liquids or liquefiable solids.

Class C Fire involving gases.

Class D Fire involving metals.

Class E Fire involving cooking oils or fats.

##### I n s t a l l a t i o n , M a i n t e na n c e a n d T e s t i n g o f F i r e P r e c a u t i o n s a n d E q u i p m e n t

Any electrical fire detection and fire warning systems must be kept on when the workplace is in use. This also applies to systems which are remotely monitored. In other cases, it is advisable to keep them turned on, even when the workplace is not in use.

All equipment provided to safeguard the safety of employees in the workplace, e.g. fire doors and fire-fighting equipment, should be regularly checked and maintained by a competent person in accordance with the relevant British Standard and the manufacturer’s recommendations.

A record of any maintenance and testing of equipment, as this will be useful if you are asked by the fire authority to demonstrate that you have an effective system in place.

It is also a good practice to carry out routine checks on a daily basis. This would include:

* + - The control panel shows that all electrical fire detection and alarm systems are operating normally, or ensuring that any faults indicated are recorded and dealt with.
    - All emergency lighting systems that include signs are lit and any defects recorded and dealt with.
    - All escape routes, including passageways, corridors, stairways and external routes, are clear of obstruction, free of slipping and tripping hazards and available for use when the premises are occupied.
    - All fastenings on doors along escape routes operate freely, so that they can be opened quickly in an emergency.
    - All self-closing devices and automatic door holders/releases work correctly, and that each door closes completely (this check should include a look at any fitted flexible edge seals, to ensure that they can still provide an effective smoke seal).
    - All exit and directional signs are checked to make sure that they are correctly positioned and can be clearly seen at all times.
    - All fire extinguishers are in position, have not been discharged, are at the correct pressure and have not suffered any obvious damage.
    - Any defects should be reported in line with your own procedures and repaired as soon as possible.

##### F i r e E x t i n g u i s h e r s a n d H o s e R e e l s

Basic inspection procedures for portable extinguishers should be carried out on a weekly basis and should include:

* + - Checking the safety clip and indication devices to determine whether the extinguisher has been operated.
    - Checking the extinguisher for any external corrosion, dents or other damages that could impair the safety operation of the extinguisher.

Hose reels should be checked weekly to make sure that they are not damaged or obstructed. They should be serviced annually by a competent person.

##### E m e r g e n c y R e s p o n s e Ac t i o n

* + - Operate nearest fire alarm or raise your arm and shout for fire.
    - Leave the office by nearest exit route.
    - Report to the assembly.
    - DO NOT stop to collect personal belongings.
    - DO NOT re-enter until told is safe to do so.

##### Confined Space

Confined spaces represent one of the most potentially hazardous working environments. The regulations define a “Confined Space” as follow a space in any vat, tank, pit, pipe, duct, flue, oven, chimney, silo, reaction vessel, container, receptacle, underground sewer, shaft, well, trench, tunnel or other similar enclosed or partially enclosed structure, if the space.

* + - Is, or is intended to be, or is likely to be, entered by any person; and
    - Has a limited or restricted means for entry or exit that makes it physically difficult for a person to enter or exit the space; and
    - Is, or is intended to be, at normal atmospheric pressure while any person is in the space; and
    - Contained, or is intended to contain, or is likely to contain:

#### An atmosphere that has a harmful level of any contaminant; or

* + - * An atmosphere that does not have a safe oxygen level; or
      * Any stored substance, except liquids, that could cause engulfment.

##### H a z a r d s i n a c o n f i n e d s p a c e

All hazards found in a regular workspace can also be found in a confined space. However, they can be even more hazardous in a confined space than in a regular worksite.

##### Hazards in confined spaces can include:

* + - Poor air quality: There may be an insufficient amount of oxygen for the worker to breathe. The atmosphere might contain a poisonous substance that could make the worker ill or even cause the worker to lose consciousness. Natural ventilation alone will often not be sufficient to maintain breathable quality air.
    - Chemical exposure due to skin contact or ingestion as well as inhalation of ‘bad’ air.
    - Fire Hazard: There may be an explosive/flammable atmosphere due to flammable liquids and gases and combustible dusts which if ignited would lead to fire or explosion.
    - Process-related hazards such as residual chemicals, release of contents of a supply line.
    - Noise.
    - Safety hazards such as moving parts of equipment, structural hazards, entanglement, slips and falls.
    - Radiation
    - Temperature extremes including atmospheric and surface.
    - Shifting or collapse of bulk material.
    - Barrier failure resulting in a flood or release of free-flowing solid.
    - Uncontrolled energy including electrical shock.
    - Visibility
    - Biological hazards.

Due to the particularly hazardous nature of confined spaces and confined space work, each entry to a confined space performed by <COMPANY NAME HERE> personnel or subcontractors, the following minimum procedures will be observed.

##### S a f e W o r k M e t h o d S t a t e m e n t :

The references listed are to be complied with and the following procedures are to be adopted as minimum standards on site. Any Subcontractors Work Method Statement covering this aspect to is to be reviewed to ensure compliance with these minimum provisions. The typical hazards addressed by these procedures include:

|  |  |
| --- | --- |
| **Hazards** | **Risk (Potential)** |
| * Exposure to toxic gas * Fire and explosion * Inadequate oxygen levels | High |

* + - Access is to be restricted to all confined spaces by way of barricading or other suitable means of exclusion.
    - Entry in to confined space will only be permitted if a “Confined Space – Entry Permit” has been ratified for that particular confined space by the <COMPANY NAME HERE>HSE Department. To receive authorization for confined space entry:

#### All work procedures to be performed in the confined space must be documented on the Confined Space – Entry Permit.

* + - * A risk assessment will be conducted, reviewed and approved for each confined space and
      * Any hazards recognized in this document are to be controlled.

##### Th e R i s k a s s e s s m e n t m u s t i n c l u d e t h e f o l l ow i n g p r o vi s i o n s :

* + - Any equipment or services which may affect the environment within the confined space (i.e. electrical services, pipelines, mechanical or electrical drives, hazardous substances etc.) are to be isolated.
    - When necessary an atmospheric testing is to be performed prior to the issuing of an entry permit:

#### by a competent person/tester;

* + - * using a gas detection unit suitable for monitoring the atmospheric conditions that may exist in each case;
      * Ensure that the gas detection unit has been calibrated in accordance with the manufacturer’s recommendations.
    - In addition, air monitoring will also be undertaken during the period of entry to ensure that atmospheric conditions remain safe.
    - Mechanical (or induced) ventilation is to be used if the ventilation of the space is inadequate to remove fumes or dust from the work area.
    - Chemicals involved in the work procedures must be identified and authorized for use in the confined space.
    - Any precautions involving hot work processes (i.e. welding, oxy-acetylene cutting) shall be identified and documented.
    - Any personal protective equipment (i.e. respirators, gas monitors, communication devices, safety harnesses and lanyard, safety goggles etc.) needed to perform work safely are to be identified and supplied to those persons involved.
    - Emergency equipment and stand-by personnel necessary to rescue workers from the confined space must be identified and incorporated into the work procedures.
    - All emergency equipment (i.e. self-contained breathing apparatus, tripods, rescue harnesses etc.) and personal protective equipment are to be suitably maintained and tested prior to use.
    - A method of communication is to be established in the work procedures to allow constant monitoring of those persons working in the confined space.
    - If the work environment changes, work is to be suspended immediately and access to the area restricted, pending reassessment of the confined space.
    - All persons entering the confined space must have the appropriate competency to enable that person to correctly perform the tasks. The competency may be acquired through training, education or experience or through a combination of these. The necessary training, education and experience will vary according to the nature of the confined space, the type of any plant being used in the space or adjacent to the space and associated systems of work, and the complexity of the tasks to be undertaken and emergency procedures required.
    - All persons entering the confined space must provide in and out details (refer to Confined Space Entry Permit – Log Sheet).
    - After concluding all work in the confined space, access is to be restricted by way of barricading or other suitable means of exclusion.
    - NO ENTRY into a confined space is to be permitted unless the completed Confined Space – Entry Permit has been:

#### Authorised by the <COMPANY NAME HERE> HSE Department; and

* + - * Validated for the duration of the entry by an authorized representative of Harlequin International (GH) limited.

##### Tr a i n i n g

Third party training is provided to the supervisor appointed for confined space works. In- house training such as tool box talks, risk assessment addressing and safety briefings are given to the personnel involving in confined space work in a regular basis.

##### Control of Substances Hazardous to Health

The Project Director/ QHSE Manager shall ensure the necessary training and information regarding the use and storage of HCS is provided, and that the use and storage of HCS is carried out as prescribed by the HCS Regulations.

Furthermore, the Project Director/ QHSE Manager shall ensure that all chemicals and all substances which require the manufacturer to produce a MSDS, delivered to site have a MSDS and the users are made aware of the occupational hazards and precautions that need to be taken when using the chemical.

First Aid Attendant shall be familiarised with the MSDS information and how to treat HCS incidents appropriately.

Access to all HCS records shall be afforded to PMC/Consultant at all times.

The table below reflects a list of the potentially hazardous chemical substances that are likely to be used during the construction phase:

|  |  |
| --- | --- |
| Hazardous chemical likely to be used | Diesel |
| Petrol |
| RE 500 chemical anchor |
| Master cure |
| Bitumen |

<COMPANY NAME HERE> shall endeavor, where possible, to source and use safer alternative material if it exists.

Prior to the use / application of an HCS, shall Risk Assessments be conducted based on the relevant MSDS, the outcome shall be documented and kept on file;

Method Statement shall include HCS Risk Assessment and suitable control measures such as training and supervision requirements;

<COMPANY NAME HERE> shall implement hazardous materials and substance register.Inventory of hazardous should be available which lists all hazardous materials and substances used on the project;

Copies of the HCS MSDS will be filed and kept in the storage area, work area and HSE office.

##### Lock Out and Tag Out

Lock Out and Tag Out systems are used to prevent the risk of injury arising from operation or energized equipment that is being tested, commissioned, maintained or serviced.

<COMPANY NAME HERE> implements a Lock Out and Tag Out process.

A method statement and job hazard analysis shall be provided for all test and commissioning work activity. No testing and commissioning work activity will be undertaken without approval of the method statement by Harlequin International (GH) limited.

Operation and maintenance manuals should be obtained for all equipment that is being serviced or maintained. Manuals will be available on site and all work will be conducted in accordance with the manuals.

<COMPANY NAME HERE> will appoint an authorized person to control the Lock Out and Tag Out procedure and process. The authorized person should be experienced in the testing, commissioning, maintenance and services activities that will be undertaken on the worksite and trained in the requirements of the Lock Out and Tag Out procedure. The authorized person should retain complete responsibility for the implementation of the Lock Out and Tag Out procedure.

All persons that are required to undertake testing, commissioning, maintenance and servicing work should be formally trained and fully understand the requirements of the Lock Out and Tag Out procedure. In addition they will receive training in the hazards and required control measures that are identified in method statements, job hazard analyses and operation and maintenance manuals.

<COMPANY NAME HERE> in conjunction with MEP contractor will implement a Lock Out and Tag Out system that includes the following steps:

* + - Preparation of an isolation permit;
    - Shut down of the system and / or equipment;
    - Fixing of warning tags to the equipment that is shut down;
    - Fixing of danger tags at points of isolation;
    - Isolation of the system or equipment
    - Locking of isolation points;
    - Verification of locking and issue of an isolation permit and authorisation for work activity;
    - Fixing of personal locks at points of isolation for each work element;
    - Completion of each work element and removal of personal locks;
    - Checking of completed work elements;
    - Verification of completed work activity;
    - Removal of isolation point locks and authorization for re energizing
    - Re-energizing and system testing
    - Removal of warning and danger tags
    - Cancellation of the isolation permit

<COMPANY NAME HERE> will monitor the implementation of the Lock Out and Tag Out system by conducting routine spot checks of testing, commissioning, maintenance and servicing work activity.

##### L o c k o u t t a g o u t o f p ow e r t o o l s

It is very important to ensure that damaged power operated tools are made safe immediately to prevent injury and or damaged.

This can be done by using a tag out system for tools and equipment and removing the tool or equipment from the work area and placing the tools in a quarantine area clearly marked out away from the work site i.e. at the site stored.

* + - On detecting a fault or damaged tool the tool must be disconnected from any power supply and the cables rolled up away for the inlet, to prevent accidental reconnection.
    - The damaged tool must them be reported to the works foremen / supervisor, who will intern contact the trained site electrician.
    - The site electrician will then inspect the tool or equipment to verify the power has been disconnected and to tool or equipment is safely and no longer has a power source.
    - The site electrician will then install a tag reading DO NOT USE / OUT OF ORDER, and proved a lock system on the equipment.
    - If the tool or equipment can be removed from the work area this will be done
    - The site electrician will log the tool in the register as defective and out of use, he will provide full information such as date last inspected, date fault was detected, reported by who, action taken; time the tool was logged and tagged out etc.

##### Ladder Safety

A ladder shall only be used at a workplace after careful determination that it is suitable for the purpose. Ladders are not to be used near leading edges.

Tools and materials shall not be carried by hand by persons ascending or descending ladders. Tools may be carried in purpose-designed pockets or special waist belts, provided that they do not impair movement.

A person working on or from a ladder shall always have both feet on the rungs and a secure handhold. If the work to be done necessitates the use of both hands, a safety harnesses and lanyard clipped to a secure anchorage shall be used.

The following requirements shall be complied with regarding Ladders and Ladders work:

* + - Ladders shall be clearly numbered, and inspected and recorded on a register.
    - A competent person shall be identified and appointed as the ladder inspector.
    - Where aluminum ladders cannot be used, then wooden ladders shall be straight grained, unpainted to allow for proper inspection of the grain cracking.
    - Ladders shall be secured at the top and chocked at the base to prevent slipping.
    - Where chocking of the base is not possible, then the user shall ensure that the ladder is held in position by another employee when ascending the ladder.
    - Ladders shall be inspected weekly and daily prior to start of work.
    - Proper storage shall be provided for ladders on site.
    - Ladders shall be erected at a working angle of approximately 750 to the horizontal;

i.e. one unit out of the base for every four units of height.

* + - Ladders shall rest on a firm level base. If it is intended to rest a ladder on an uneven base or on stairways, for example, a levelling device shall be used. Loose packing shall not be used.
    - Where possible, all ladders shall be secured near the top (to prevent the base sloping outwards and the top slipping sideways or twisting), by lashing or clamping each stile to a convenient secure anchorage.
    - Ladders shall extend at least 1.0 meter above the stepping-off point.
    - Ladders shall be placed so that there is a clear space behind each rung to permit secure placement.
    - A resting platform shall be provided at vertical intervals of 9.0 meters. Where persons can fall more than 2.0 meters from these platforms, guard rails and toe boards shall be provided.
    - If a ladder protrudes through a working platform, the opening shall be as small as possible. In all cases, the opening shall be of 500 mm maximum width.
    - Suitable access to a working place shall be provided at the stepping off-point. Persons shall not be required to climb over or through guard rails and toe boards. Gaps in toe boards and guard rails shall, however, be kept as small as possible.
    - Single board runs to ladders shall not be used.
    - Ladders used to gain access to scaffold platforms and working places, etc. shall be single pole ladders. Extension ladders or aluminum ladders shall not be used.
    - Aluminum, wooden and extension ladders may be used where the ladder is used as a working place. Aluminum ladders, however, must never be used where electrical hazards exist.
    - Only one person shall be permitted on a ladder at any one time. When a person is climbing a ladder that is not secured at its top, another person shall always foot the ladder.
    - Ladders shall not be used to support a working platform other than that which is supplied with the ladder limpet system.

##### Vibration Exposure

We can feel vibration and know that people might be exposed to it. But we cannot determine if what we feel is going to be harmful. For that, we must measure vibration exposure.

Vibration enters the body from the organ in contact with vibrating equipment. When a worker operates hand-held equipment such as a chain saw or jackhammer, vibration affects hands and arms. Such an exposure is called hand-arm vibration exposure. When a worker sits or stands on a vibration floor or seat, the vibration exposure affects almost the entire body and is called whole-body vibration exposure.

##### Ways to Reduce Vibration Exposure

There are many ways of reducing vibration exposure. Following are the best possible ways to reduce vibration in Construction Workplace.

##### Change to a tool or work process that has lower vibration

Today most types of tools are available in versions that have lower vibrations. In applications where those tools are suitable, they can often reduce the exposure considerably. It is important though to make sure the tools have equal or better performance.

##### Change to a tool or work process that can do the job in a shorter time

In many material removal processes the time to do the job is proportional to the power used. It is therefore often worthwhile to investigate the possibility to do the job with a more powerful tool to be able to reduce exposure time.

##### Check you installation to make sure you use the tool in the most effective way

Too often in industry hand-held power tools are not used efficiently because the air installation does not give enough air to the tool to run at maximum power. Power drops quickly with pressure loss and the insufficient power makes the process time unnecessarily long. The most common reason for pressure drop is too long hoses of too small diameter and quick-couplings with insufficient flow capacity.

##### Use job ration to reduce the trigger time

In cases where there are no means to reduce the vibration exposure enough to allow an operator to work a full shift without exceeding the action value there is always a possibility to introduce job rotation to reduce exposure time.

##### Assessment of the Risk to health created by vibration in the work place.

* + - Risk assessment should be carried out for activities which have potential of exposing employees to hazards arising from vibration. The risk assessment shall identify the control measures that need to be taken to meet the requirements.
    - In conducting the risk assessment, the <COMPANY NAME HERE> shall assess daily exposure to vibration to determine if the employees are to be exposed to vibrant. Assessment shall be mean of:

#### Observation of specific working practices.

* + - * Reference to relevant information (e.g. equipment specifications, third party, etc. on the probable magnitude of the vibration corresponding to the equipment used in the particular working conditions and
      * If necessary; measurement of the magnitude of vibration to which employees are liable to be exposed.

##### The risk assessment shall be included consideration of:

* + - The magnitude, type and duration of exposure, including exposure to intermittent vibration or repeated shocks.
    - The effects of exposure to vibrant on employees whose health is at particular risk from such exposure.
    - Any effects of vibration on the workplace and work environment, including the appropriate handling of controls, the reading of indicators, the stability of structures and security of joints.
    - Any information provides but he manufactures of works equipment.
    - The availability of replacement equipment designed of works equipment.
    - Any extension of exposure at the workplace to whole body vibration beyond normal working hours, including exposure in the rest facilities supervised by the employer.
    - Specific working conditions such as low temperatures ; and
    - Appropriated information obtained from health surveillance including, where reasonably practicable published information.
    - <COMPANY NAME HERE> shall assess proposed modification to equipment ,addition of new processes or the purchasing of new equipment to assess their effect on the work environment and employees, with special focus placed in vibration hazards, <COMPANY NAME HERE> shall;
    - Purchase equipment that has built in vibration control devices. Special attention shall be placed on equipment that can cause whole body vibration (e.g. Jack hammers, earth moving equipment, industrial trucks ...etc. to ensure vibration control devices are built into the equipment and appropriated for their intended use.
    - Implement a maintenance programme to ensure equipment is maintained to manufactures specification and vibration control equipment is functioning appropriately.
    - The risk assessment shall be revised regularly, and updated.

##### Exposure Limit value and action values

* + - **1 Hand Arm vibration**
      * The daily exposure limit value for hand arms vibration is 5m/s2A (8).
      * The daily exposure action value hand arm vibration is 2.5m/s2 A (8).
    - **Whole Body vibration**
      * The daily exposure limit value for whole body vibration is 1.15m/s2 A(8)
      * The daily exposure action value for whole body vibration is 0.5m/s2 A(8

##### Permit to Work System

##### Permit to Work

A Permit to Work is a formal written system used to control specific risks relating to certain types of work. A Permit to Work specifies the work to be carried out and controls that are required to be implemented as well as enabling <COMPANY NAME HERE> to control and monitor that work.

Different types of permits will be defined within the procedures below.

The following are typical examples of permits that may be required on projects:

* + - Confined spaces
    - Hot works
    - Electric work above 220 V

The Permit to Work register will be maintained for all <COMPANY NAME HERE> permits. The Permit to Work In charge must ensure that the following information is recorded:-

* + - Permit Number
    - Name of contractor
    - Location of work
    - Date and time permit valid from
    - Date and time permit closed

The Permit to Work In charge will administer all permits in line with this procedure.

Any Contractor requiring a Permit to Work must first liaise with a member of the <COMPANY NAME HERE> site supervision team, who will check that the permit to be issued will not cause work to be undertaken to adversely affect any other contractor’s work. Once authorized, to do so by the supervisor, the contractor is to liaise with the <COMPANY NAME HERE> Safety Department and provide all information required by the permit. The relevant Risk Assessment must either be attached to the Permit to Work or referenced on the Permit using a recognized reference number.

Prior to commencing the work, work permit must be obtained for that particular work for that day till the end of the shift. Separate work permit will be obtained even if the work is not completed. Once work has been completed, the permit must be closed out and returned to the Permit in charge (<COMPANY NAME HERE>HSE Department) on the final date of its validity or on the day of issue for permits of one-day duration.

##### E x a m p l e s o f P e r m i t s t o W o r k Confined Space Permit

Prior to any work being undertaken within a work area defined by the Confined Spaces Procedure, a Permit to Work, valid for one day, must be obtained by completing Permit to work form.

##### Hot Works Permits

Prior to any works being undertaken involving hot works including welding, burning, cutting, grinding or any other activity producing a source of ignition a permit to work, valid for one day, must be obtained by completing Permit to work form. Each hot works activity must be covered by a specific permit unless a hot works zone (e.g. a fabrication area) is established which could then be covered by one permit, but this must be in agreement with the Safety Manager/Permit to work in charge.

##### Hot Works

All operations classified as Hot Works covering typical activities such as open flame gas cutting / heating, gas welding / brazing, electric arc welding, cutting, grinding and other fire producing or spark producing operations, are to controlled by a suitable Hot Work Permit / Permit to Work (PTW).

Permit to Work requirements also covers operations where spark or ignition producing work in all hazardous areas of site and or areas of storage or use of flammable, explosive, hazardous materials, etc. and in confined spaces, are to be undertaken.

Commencement of work shall not be permitted unless the appropriate level of authority has endorsed the PTW and specified controls such as suitable welding screens are in place. Hot work permits shall be issued by the area; HSE Manager/officer will inspect the workplace and issue the hot work permit.

Hot Work Permits will only be valid for a period specified within the PTW. Hot work operations shall not be permitted in the following situations:

* + - In areas not designated fire safe
    - In the presence of explosive atmosphere (mixture of flammable gases, vapours, liquids or dusts with air) or explosive atmosphere that may develop inside unclean or improperly prepared drums, tanks or other containers and equipment which have previously contained such materials or that may develop in areas with an accumulation of combustible dusts.

During Hot Work Operations, there shall be a fire extinguisher immediately to hand.

Gas cylinders are to be stored and used in an upright position. Propane cylinders are to be kept / stored away from all sources of heat and ensure that the smallest practical cylinder size is used where practical.

The following activities will be regarded as hot work operations on the project:

* + - Electric Arc Welding
    - Gas Cutting and welding
    - Grinding and or cutting steel with angle grinder.

##### F i r e P r e ve n t i o n

**Work in Least Hazardous Area**

It is possible that hot-work should be done in an area which has the least potential of igniting combustible materials in 1m radius. If work must be done where there is exposure, the area should be thoroughly cleaned, protected against fire and inspected before the work begins. Sparks should be confined, wood floors should be wet down, providing no shock hazard is introduced, or a protective cover used.

##### Removal of Combustible Materials

Combustible materials should be removed if possible. Otherwise, they should be protected with an appropriate covering (i.e. floor openings or cracks in the flooring that cannot be covered).

Hot-work area could rapidly create explosive concentrations of dusts, vapours, or gases. It should be stopped while hot-work is being done. If hot-work must be done in areas where flammable liquids are present, extensive control procedures to eliminate or minimize the possible hazards of flammable vapours must be followed.

##### Fire Protection

Hot work areas must be protected and screened. Fire extinguishers and a water source should be provided at all times.

On many hot-work jobs, a fire watcher may be required when the following exists:

* + - Combustible material, in building construction or contents, closer than 10metres to the point of operation.
    - Combustibles are more than 10m away but are easily ignited by sparks.
    - Wall or floor openings within a 10m radius exposed to combustible material in adjacent areas including concealed spaces in walls or floors.
    - Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings or roofs and are likely to be ignited by conduction or radiation.
    - Fire watchers shall have fully charged fire extinguishers readily available.
    - Fire watchers must be familiar with the evacuation and use of fire extinguisher.
    - A fire watch must be maintained for minimum one hour after completion of the burning, welding and / or spark - producing operation.

##### House Keeping

Housekeeping is defined as cleaning of debris which reduces hazards.

Debris: unusable or unwanted construction waste materials.

Hazardous waste: waste that is either toxic or harmful to environment.

The Housekeeping protocol are but not limited to:

* + - Work areas must be clean all times.
    - A system must be established to clean areas on daily basis.
    - Work-in-charge is responsible for ensuring that effective maintained at site.
    - Employees are responsible to follow good housekeeping of their job duties.
    - <COMPANY NAME HERE> Site management team to ensure chute and skips are cleaned regularly.
    - Do not leave cables, cords or loose objects in passage ways, stairways, walkways or underfoot.
    - Remove all materials, tools and equipment such as shackles, slings, ladders, safety equipment, etc. from work areas and return them to storage areas when not needed.
    - Return all tools, supplies, materials and equipment to their proper storage area after completion of job.
    - Each contractor is required to keep his work area clean on a daily basis and center pile construction debris at designated locations in the site. <COMPANY NAME HERE> shall remove all debris from the site for disposal.
    - <COMPANY NAME HERE> shall place skips around the construction areas and near the site offices at locations to be approved by the Project Director. The Contractor shall at the end of each day’s work, empty out the skips and haul out the garbage and debris off Site.
    - The Contractor shall, on a daily basis, clean and remove all garbage, waste and debris from his work area and place them in skips provided by Harlequin International (GH) limited.
    - The Contractor shall provide mini-dumpster on a daily basis for use of other contractors (on each floor) and ensure disposal of debris on a daily basis and as directed by the Project Director.

##### Hazardous Waste

Hazardous waste including waste oil, paint, thinners, solvents if encountered or generated as a result of Contractor’s activity, shall be disposed according to the local municipal procedure. Hazardous Waste shall be stored in a secure place and a ‘display board’ shall be placed outside the storage area of hazardous waste, which will detail the quantity and nature of hazardous waste.

##### Lone Working

<COMPANY NAME HERE> will undertake a risk assessment for any situation that may arise where workers (including night watchman) may be working alone. This risk assessment may take into account arrangements that must be in place to safeguard the worker and deal with any situation that may arise including emergencies.

The risk assessment carried out by the <COMPANY NAME HERE> will identify the procedures to be employed in the case of the lone worker requiring assistance in the event of an accident or emergency situation. Typical planning will include but not be limited to the use of mobile telephones and regular reporting in calls. <COMPANY NAME HERE> will ensure a procedure is in place to deal with any situation that may arise where a lone worker does not report in.

The following works are prohibited for lone working:

* + - Work at height where safety harnesses and lanyard are required.
    - Work in excavation deeper than 2.0 meters.
    - Working in a high-risk confined space, where a supervisor may need to be present, along with someone dedicated to the rescue role;
    - People working at or near exposed live electricity conductors;
    - Other electrical work where at least two people are sometimes required.

##### Emergency Response

An Emergency Management Plan has been developed for the Project detailing the procedures required to ensure that adequate emergency response systems are developed, maintained and tested in accordance with <COMPANY NAME HERE>and regulatory authority

Relevant details of the Emergency Management Plan shall be provided to all personnel during the site induction and information posted on notice boards.

## Safety Signs and Colour Codes

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Geometric shape** | **Meaning** | **Main colour** | **Contrast colour** | **Graphical symbol colour** | **Signage Examples** | |
| Round shape black pictogram on white background red edging and diagonal line | Prohibition/ danger | Red | White | Black | No smoking No unauthorized  vehicles |  |
| Round shape white pictogram on blue background | Mandatory action | Blue | White | White | Wear safety helmet**,** gloves |  |
| Triangular shape black pictogram on yellow background with black edging | Hazard | Yellow | Black | Black | Hot surface Radiation High voltage |  |
| Rectangular or square shape white pictogram on green background | Safe condition Escape route | Green | White | White | First aid room Fire exit Evacuation assembly- point |  |
| Rectangular or square shape white pictogram on red background | Firefighting equipment | Red | White | White | Fire point Fire alarm Wet riser  Fire extinguisher |  |
|  | | | | | | |

Safety Signs and colour Codes

##### F i r e F i g h t i n g E q u i p m e n t

Firefighting equipment must be identified by using a specific colour. Identifying this equipment is red or predominantly red.

The location of fire fighting equipment must be marked in red.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Extinguisher** | **Colour** | **Guidelines** | | | | |
| **Solid, Wood, Paper** | **Flammable Liquid** | **Flammable Gases** | **Electrical Equipment** | **Cooking oil and fats** |
| Water | Red |  | **X** | **X** | **X** | **X** |
| Carbon Dioxide | Black |  |  | **X** | **X** |  |
| Dry Chemical Powder (DCP) | Blue |  |  |  |  | **X** |
| Foam | Pale Cream | **X** |  | **X** |  |  |

Table 14 Fire Fighting Equipment

## Workplace Transport Safety and Traffic Management

##### W o r k p l a c e Tr a n s p o r t

Workplace transport means any vehicle that is used in work setting, such as fork-lifts, trucks, compactors dumpers, tractors or mobile cranes. It can also include cars, vans and large vehicles when these are operating in site premises.

##### R i s k As s e s s m e n t

Managing for safety is about reducing risks, not eliminating them. Think about what accidents might happen, and take steps to try and make sure they are avoided. This procedure helps recognize the special hazards from transport in the workplace. General guidance on risk assessment is available in the HSE Five Steps to Risk Assessment - [*http://www.HSE .gov.uk/pubns/indg163.pdf*](http://www.hse.gov.uk/pubns/indg163.pdf)

First, identify the work activities involving vehicles (including visiting vehicles) over a reasonable period (e.g. over the course of a week). Activities may include:

* Arrival and departure
* Travel within workplace
* Loading, unloading and securing loads
* Sheeting
* Coupling
* Vehicle maintenance work

Next, a proper risk assessment will be carried out to put any moving plant on site.

##### V i s i t i n g D r i ve r s

Visiting drivers must be inducted at the workplace. The route they need to take, and relevant safe working practices (e.g. for parking and unloading) must be adhered to, as they may not have visited the site before. Consider printing site rules, directions, maps, approach information (e.g. narrow routes, weak bridges) on the back site of order forms or invoices, so visiting drivers know what to expect before arriving on site.

Visiting drivers will be restricted or controlled when entering potentially dangerous areas, moving to or from their vehicles or places such as the site office, lavatory or washroom.

Drivers must have different visibility from their cabs. They must follow signs or speed limits in English/Arabic languages will be provided & displayed on strategic location.

##### D e l i v e r i e s

Deliveries and collections can be some of the most dangerous transport activities. A significant number of transport accidents in the workplace take place during deliveries. Parking, loading and unloading should be off the road or pavement, well away from the working area. Where this is not possible, remember that assessment will still cover work activities on site roads and all of the normal duties of employers and employees apply.

##### R i s k c o n t r o l d u r i n g d e l i ve r i e s

* Where possible, present the side of the vehicle with the easiest access to the workplace.
* Where possible, lay the site out so that reversing is unnecessary.
* Where reversing is unavoidable, make it as safe as possible, and consider using a competent and authorized signaler (banks man) with appropriate high visibility equipment.
* When maneuvering on public roads, remember that public traffic and pedestrians have priority and that signalers have no legal authority to stop traffic on the public highway. If cones or barriers are to be used, discuss this with the local police and highway authority, and don’t direct pedestrians on to the road.
* When using lift trucks, drivers are aware of increased risk of overturning from driving over kerbs or over road cambers, and make sure they know the correct driving procedures for these conditions.
* If articulated vehicles are being coupled or uncoupled, check that drivers know how to park them. Make sure drivers understand the correct use of parking and hand brakes.
* Drivers will receive adequate safety information for each delivery or collection beforehand, such as restrictions on the type of vehicle the site can handle, or problems such as one-way systems or low bridges. If possible, provide a site plan including areas, location of reception, route through the site, location of unloading areas, driver waiting areas, and written information on procedures for visiting drivers (e.g. wearing high visibility vests, limits on mobile phone use, prohibitions or special conditions for reversing such as using a banks man).
* Simple systems for reporting any vehicle accidents, incidents, near misses and other safety concerns during delivery and collection. Exchange the information with all the other parties involved and actions on the reports will be documented.
* Deliveries will be under control of authorized person for unloading, who will be present during the process. He will have the authority to refuse or halt unloading if there are safety problems, and should be confident that a decision to refuse delivery will be supported by management.
* Lifting operations must be properly planned by a competent person, appropriately supervised and carried out in a safe manner. Make sure that lifting equipment is suitable for the use it is being put to, marked with safe working load, properly maintained and inspected, and receives a periodic thorough examination.
* Everyone should be aware of what to do. They should have contact details for the other parties in case of problems.

##### Tr a f f i c R o u t e s

Site will be organized so that pedestrians and vehicles can circulate safely. Workplace traffic routes must also be suitable for the people and/or vehicles using them, and pedestrian movement counts as “traffic”. Where vehicles and pedestrians share a traffic route, they must be safely separated.

General principles for traffic routes are:

* Areas should be wide enough for the safe movement of large vehicles (including visiting vehicles).
* Consider vehicle height into account. Remember that the height of a vehicle may vary, e.g. when the body of a tipper vehicle is raised. Potentially dangerous obstructions, such as overhead electric cables, or pipes containing hazardous chemicals, need to be protected using goal posts, height gauge posts or barriers. They should be constructed of suitable material for the location, the type of traffic, the size of the route, and the ground it is laid on. They should have firm and even surfaces, and be properly drained.
* Avoid steep slopes. If steep slopes are unavoidable, they should be properly posted.
* Avoid sharp or blind bends.
* Maintain and provide a good grip for vehicles and people, e.g. by roughening smooth surfaces or apply sand on slippery ones.

##### Te m p o r a r y Tr a f f i c R o u t e s

These routes should comply with the same basic safety standards applying to prepared routes, i.e. they should be suitable for their purpose, have firm and even surface, be properly drained, and slopes that are too steep should be avoided.

Safety banks or Jersey barriers will be provided on some routes to prevent vehicles running over open edges, or to indicate a safe route. It is recommended that a bank should be 1.5 m tall or the axle height of the largest vehicle using the route (whichever is greater) and be strong enough to absorb a vehicle impact.

Temporary roadways increase the risk of accidents. Consider:

* Driver competence.
* Information and instructions to drivers, especially if they are not familiar with the temporary roadways.
* Safe systems of work and traffic management e.g. use temporary road signs and traffic lights.
* Supervision of drivers, vehicle activities, and other employees.

##### R i s k F a l l s , C o l l i s i o n s a n d O ve r h e a d H a z a r d s

For marking falls, obstacles or other elements that can cause the risk of falls, collisions or knocks either the appropriate sign board, as laid on in the foregoing section, or a safety colour or a combination of both can be used.

In the marking of those areas in the undertakings to which workers have access during their work in which there is a risk of colliding with obstacles, of falling or if objects falling should be done with a safety colour.

The colour signs referred to in the two foregoing paragraphs must be implemented using alternating yellow and black stripes. The stripes must be at an angle of approximately 45° and of more or less equal size, as per the following model.

##### Tr a f f i c R u l e s

When necessary of worker’s protection, traffic routes for vehicles must be clearly identified by continuous stripes in a clearly visible colour, perfect white or yellow, taking into account the colour of the background. The stripes must be located so as to indicate the necessary safe distance between the vehicles.

As far as is practicable, permanent traffic routes in built-up areas should be similarly marked, unless they are provided with suitable barrier or pavements. Considering the areas that exist in traffic routes for intermediate storage or for parking vehicles or elements such as mobile cisterns, corresponding signs and signals for regulating traffic will have to be employed as per traffic sign code. When pedestrian crossings are required for safety reasons for crossing internal traffic routes, signs and signal criteria similar to those used in the Highway Code should be adopted. Inside site premises speed limit of 10 KM/PH must be strictly followed and displayed. Where vehicles are crossing near site office premises, the speed limit of 10 KM/PH must be displayed with caution signs for drivers and pedestrians.

##### V i s i b i l i t y

Forward visibility needs to be good enough to allow drivers to see and avoid hazards. Adequate visibility is related to vehicle speed and the distance drivers need to stop or change direction safely to avoid hazards. Additional factors affecting visibility are available light, dust, bad weather, the height of the driver above the road end the arrangement of vehicle windows. There should be enough visibility at junctions and bends to allow drivers and pedestrians to see anything that might be dangerous. Avoid sharp or blind bends, and where they are unavoidable, consider measures such as mirrors to add vision around corners.

When visibility at a junction cannot be improved sufficiently, vehicles will be signalled with banks man or a flagman.

##### L o a d i n g a n d U n l o a d i n g

Loading and unloading can be dangerous. Heavy, hot, cold or corrosive loads on moving vehicles, overturning and at height can all lead to injuries or death.

Loading and unloading areas should be:

* Clear of other traffic, pedestrians and people not involved in loading or unloading.
* Clear of overhead cables, pipes, or other dangerous obstructions.
* To maintain stability. Trailers should be parked on firm-level ground.
* Fenced or provided with outer edge protection, where there is a danger of people falling.
* If necessary, protected against bad weather.

Loads should be spread as evenly as possible, during both loading and unloading. Uneven loads can make the vehicle or trailer unstable. Loads should be secured or arranged so that they do not slide around. Racking may help stability. Heavy loads are dangerous. Always think that measures are needed to control them. Special safety equipment (such as guards or skirting plates) may be necessary if there is a risk of anything being caught in machinery (e.g. dock levellers or tail lifts).

Ensure the vehicle and trailers have their brakes applied and all stabilizers properly positioned before beginning loading or unloading. The vehicle should be as stable as possible.

Other precautions may be necessary:

* In some workplaces, it may be possible to install a harness system to protect people working at height.
* Provide a safe place where drivers can wait if they are not involved. Drivers should not remain in their cabs. No one should be in the loading/unloading area if they are not needed.
* Vehicles must never be overloaded. Overloaded vehicles can become unstable, difficult to steer or be less able to brake.
* Always check the floor or deck of the loading area before loading to make sure it is safe. Look out for debris, broken boarding, etc.
* When loading a vehicle, think about how it will be unloaded. If it will be unloaded in stages, make sure that this can be done as easy as possible and without making the remaining load unstable or badly distributed.
* Loads must be suitably packaged. When pallets are used, the driver needs to check that:
  + They are in good condition.
  + Loads are properly secured to them.
  + Loads are safe on the vehicle.
* Tailgates and drop sides must be closed when possible. If overhang cannot be avoided, it must be kept to a minimum and clearly marked.
* Some goods are difficult to secure during transport. Haulers and recipients will need to exchange details of loads in advance so that they can agree safe unloading procedures.
* Before unloading, check that loads have not shifted during transit and are not likely to move or fall when restraints are removed.
* There must be safeguards against drivers accidentally driving away too early. This does happen, and is extremely dangerous. Measures should include:

#### Traffic lights

* + The use of vehicle or trailer restraints
  + Vehicle keys or paperwork can be held by the person in charge of loading or unloading until it is safe for the vehicle to be moved
  + These safeguards would be especially effective where communication problem could arise, e.g. where drivers do not have English as their first language

##### Tr a f f i c M a n a g e m e n t

Suitable traffic management and parking control will be established where the interface of plant, vehicles and people is affected by the project works including workplace personnel and the public or surrounding neighborhood. Prior to commencing any work, which involves interface with mobile powered plant and vehicular and pedestrian traffic a suitable traffic management plan shall be developed and implemented to reduce the likelihood of conflict between either or all of the above.

##### C a r r y O u t M a i n t e n a n c e E s c a p e F a c i l i t i e s

Many accidents occur during maintenance work. Controlling the risk means following safe working practices.

* Where possible, carry out maintenance with the power to the equipment ideally disconnected with fuses / keys.
* Isolate equipment and pipelines containing pressurized fluid, gas, steam or hazardous material. Isolating valves should be locked off and the system depressurized where possible.
* Support parts of equipment which could fall.
* Allow moving equipment to stop.
* Allow components which operate at high temperatures time to cool.
* Switch off the engine of mobile equipment, put the gearbox in neutral, apply the brake and, where necessary lock the wheels.
* To prevent fire and explosions, thoroughly clean vessels that have been contained. Flammable material can give off enough vapour to create an explosive air mixture which could be ignited by a hand lamp or cutting / welding torch.
* Where maintenance work has to be carried out at height, ensure that a safe and secure means of access is provided which is suitable for the nature, duration and frequency of the task.

##### I n s t r u c t i n g a n d Tr a i n i n g o f E m p l o ye e s a n d C r ew

Employees or crew must have the knowledge they need to use and maintain equipment safety.

* Information they need, e.g.: manufacturer’s instructions, operating manuals, training courses.
* Instruct them on how to avoid risks, e.g. .check that the drive is not engaged before starting the engine / machine and do not use a sloping ground.
* An inexperienced employee may need some instruction on how to use hand tools safely. Work-in-charge to monitor and train personnel.
* Appropriate training will often be necessary, particularly to control the risk. It depends on how an employee uses the work equipment.
* Only competent workers should operate work equipment.
* Never assume an employee can use work equipment safely especially if they have just started work, even if they have used similar equipment elsewhere.

Training may be needed for existing staff as well as inexperienced staff or new starters (do not forget temporary staff) particularly if they have to use powered machinery. The greater the danger, the better the training needs to be. For some high risk work such as driving fork lift trucks, using a bench saw and operating a crane, training is usually carried out by specialist instructors.

## Plant and Equipment

All plant and equipment brought to the project shall be accompanied by the appropriate documentation, maintained in serviceable condition, properly used by competent and qualified personnel and any defective plant and equipment promptly removed from operation. Inspection and testing of all plant and equipment will be undertaken in accordance with the Plant, Equipment & Processes Inspection & Testing Schedule.

Fall arrest equipment owned by <COMPANY NAME HERE>shall be independently inspected out on a monthly basis in accordance with the Plant, Equipment & Processes Inspection & Testing and a register maintained to record all height safety equipment brought onto site. Where required, subcontractors and suppliers shall provide evidence of inspection of fall arrest equipment to Harlequin International (GH) limited.

##### Safe Lifting / Rigging

This procedure is to assist in realizing the aim of better provision for safety by providing recommendations and procedures for safe practice while carrying out lifting and rigging work in construction practice.

Lift Plan will be done for all lifting operation to be done by lifting machinery on the project, the designated Appointed Person will complete such lift plans and submit it to Project Director /Consultant for approval, and a risk assessment for the lifting operation will be carried out and included into the lift plan.

The lifting tackle required for the lifting operation will be identified by the Appointed Person through the lift plan. Only the specified lifting tackle will be permitted to be used on site.

All members of the lifting operations team including the Appointed Person, Crane Drivers and Slingers / Signalers / Banksmen will be competent and have such practical and theoretical knowledge and experience as is necessary to carry out their duties.

##### Lifting Requirements / Rules

The following fundamental rules will be applied to all lifting operations with zero tolerance. All personnel must be kept out if any area where they might be injured by a falling or a shifting load. Do not stand below loads. Never stand between loads and walls / bulkheads etc. Always ensure an escape route is available.

* + - Lift may only take place on approval of the Lift Plan.
    - If a lift deviates from the plan or any complications arise, the lifting operation must be stopped and the lift plan must be revised as to allow for the changes made on site.
    - Lifting operations will be undertaken by a minimum of three competent people the crane operator, slinger / signaler (slinger and signaler can be one person) / banks man / flagman (banks man and flagmen can be one person) and Supervisor.
    - Lifting of the load from the truck / trailer is controlled by the signaler designated for the task.
    - Lifting components cast in concrete are to have a minimum safety factor of 3:1.
    - All lifting tackle shall be examined by a competent person on a regular basis. This should not exceed a 6 month period, depending on frequency, type of use, and environmental conditions.
    - Visual pre-use inspection shall be done on all lifting tackle prior to and after use.
    - Any proof loading shall be carried out by a registered third party in accordance with the relevant Standard or the manufacturer’s recommendation.
    - A register shall be kept of all lifting tackle as per requirements.

##### C o m p e t e n c e R e q u i r e m e n t s Banks man

Before acting as a banks man on a specific installation the banks man must have authorization of the following:

* + - An approved training course certificate from third party.
    - Experience of lifting operations for not less than 6 months in construction industry.
    - Formal assessment of competence lifting and mechanical handling guidelines.
    - Training the qualification for VHF communication radio with crane.
    - Assessed every year by Third Party & validation on certification.

##### Crane operator

The crane operator must be:

* + - Trained and certified competent as per BS 7121
    - Have practical and theoretical knowledge of lifting operations
    - Must have minimum of 1 years’ experience in crane operations.
    - Third party (certified holder) Assessed every year by a qualified assessor in line with BS 7121.

##### Inspection of Plant and Equipment

All plant and equipment must be visually inspected by the authorised user at the start of each shift and thoroughly examined by a competent person in accordance with the manufacturer’s instructions and relevant legal requirements for that plant and equipment. Any faulty plant or equipment must be withdrawn from use and replaced.

##### Maintenance

Many accidents occur during maintenance work. Controlling the risk means following safe working practices.

* + - Where possible, carry out maintenance with the power to the equipment ideally disconnected with fuses / keys.
    - Isolate equipment and pipelines containing pressurized fluid, gas, steam or hazardous material. Isolating valves should be locked off and the system depressurized where possible.
    - Support parts of equipment which could fall.
    - Allow moving equipment to stop.
    - Allow components which operate at high temperatures time to cool.
    - Switch off the engine of mobile equipment, put the gearbox in neutral, apply the brake and, where necessary lock the wheels.
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##### Instruction and Training

Employees or crew must have the knowledge they need to use and maintain equipment safety.

* + - Information they need, e.g. manufacturer’s instructions, operating manuals, training courses.
    - Instruct them on how to avoid risks, e.g. .check that the drive is not engaged before starting the engine / machine and do not use a sloping ground.
    - An inexperienced employee may need some instruction on how to use hand tools safely. Work-in-charge to monitor and train personnel.
    - Appropriate training will often be necessary, particularly to control the risk. It depends on how an employee uses the work equipment.
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##### Radio Communication for Lifting Operations

Tower cranes often work on congested construction sites where the banks man is out of sight of the tower crane operator and the standard hand signals specified cannot be used. As an alternative, hand held VHF/UHF radios are often used.

Appendices

# Appendix 1 – HSE Policy

# Appendix 2 – Organizational Chart

# Appendix 3 – HSE Training Matrix

Get more QHSE plans, procedures, files, documents, and training presentations.

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