

Construction Hazard and Risk Control

Lecture Title: Scope and Nature of Construction Activities

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Date: 8th October 2025



Undergraduate Diploma in
Occupational Health and Safety

Introduction:

Construction work involves a variety of different activities, each with their own particular hazards, such as site clearance; demolition; dismantling; excavation; loading, unloading and storage of materials; site movements; fabrication; decoration; cleaning; installation; removal and maintenance of services and landscaping.



Introduction:

The nature of construction work is such that it has its own range of particular issues, that can affect the risk to safety and health of those persons involved such as: the transitory nature of workers; the temporary nature of construction activities and the constantly changing workplace; time pressures from clients; weather conditions; levels of numeracy and literacy of workers and native or foreign language workers.



Types of Work:

Involves: alteration, conversion, fitting out, commissioning, renovation, repair, upkeep, redecoration

Or other maintenance (including cleaning which involves the use of water or an abrasive at high pressure or the use of corrosive or toxic substances), de-commissioning, demolition or dismantling of a structure.

The preparation for an intended structure, including site clearance, exploration, investigation (but not site survey) and excavation, and the clearance or preparation of the site or structure for use or occupation at its conclusion



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Types of Work:

- The assembly on site of prefabricated elements to form a structure or the disassembly on site of prefabricated elements which, immediately before such disassembly, formed a structure.
- The removal of a structure or of any product or waste resulting from demolition or dismantling of a structure
- The installation, commissioning, maintenance, repair or removal of mechanical, electrical, gas, compressed air, hydraulic, telecommunications, computer or similar services which are normally fixed within or to a structure.

Key Definitions:

1. Building works: The erection or extension of a building
2. Renovation: The process of improving a structure
3. Alteration: Change or modification to a structure
4. Maintenance of existing premises: (Occupied or unoccupied)- keeping the premises in working order and preventing deterioration.
5. Civil engineering: design, construction and maintenance of works such as bridges, roads and buildings.
6. Works of engineering construction: the construction, structural alteration, repair, maintenance or demolition of a dock, harbour, inland navigation works, tunnel, bridge, viaduct, water-works, reservoir, pipe-line, aqueduct, sewer, sewage works
7. Demolition: dismantling or pulling down of a building structure.



Range of Activities:

1. Site clearance: removing of buildings, facilities or unwanted materials from the construction site including waste.
2. Demolition: pulling down a building by mechanical methods such as pusher arm.
3. Dismantling: following the reverse order of construction techniques by gradually dismantling a building with hand tools.
4. Excavation: the removal of earth by digging below ground level, usually to allow the construction of a foundation or basement
5. Loading, unloading and storage of materials: continuous supply and availability of building and related materials.
6. Site movements: wide range of vehicles and mobile plant in use .



The morning after: Paceville building collapse in pictures

Albert Galea Thursday, 12 June 2025, 11:26 Last update: about 4 months ago



The collapse of an apartment block shocked Malta late on Wednesday night as it reignited memories of past fatal construction collapse tragedies.

In this instance, tragedy was averted: nobody was injured and the apartment block was empty when it collapsed as 32 residents had been evacuated from it some hours before.

Pictures from the site on Thursday morning show the devastation on the site.

Jean Paul Sofia: Corradino construction site came down in seconds, court expert testifies

Monday, 11 March 2024, 13:22 Last update: about 3 years ago



The architect responsible for the construction project which led to the death of Jean Paul Sofia had been aware of the building standards applicable to brick buildings, but had not told the builders how to reinforce them, a court was told on Monday morning.

Sofia died in tragic circumstances, when a three-storey building that he had been working on, collapsed during construction works. Five other men had to be rescued from the rubble by members of the Civil Protection Department. Sofia's mother, Isabelle, was present for Monday's court sitting.



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Particular Construction Challenges:

1. Transitory nature of workers: Changing workforce leads to difficulty in consistent resources and planning of deliverables
2. Temporary nature of construction activities and the constantly changing workplace – as the construction project progresses, each stage may involve new activities and consequently new hazards. This means that risk assessments and safe systems of work need to be continually updated to reflect the changing work activities.
3. Time pressures from clients – the need to complete novel projects within the shortest possible time-frame can encourage “cutting corners” on safe working procedures and possibly compromise health and safety standards.



Particular Construction Challenges:

4. Weather conditions – most construction work involves working outdoors and therefore weather conditions such as rain, wind, extremes of temperature and even exposure to the sun introduce additional risks to health and safety

5. Levels of numeracy and literacy of workers – poor levels of literacy and numeracy in a workforce where a high level of education is not a requirement for recruitment can reduce the degree of understanding of essential health and safety information or instructions.

6 Native or foreign language workers – information, instruction and training, which are fundamental in ensuring that work is carried out in a safe manner, must be presented in a language that is understood by all of the workforce. Essential health and safety information should be presented in languages that are fully comprehended by all workers.



Roles and Responsibilities:

1. Clients:

- Allocate adequate time and resources
- Appointing a co-Ordinator for the project
- Should ensure that competent people are appointed
- Provide information to other parties on:
 - Issues affecting the site
 - Construction work
 - Proposed use of the structure
 - Time available for planning and preparation
 - Any relevant information from an existing building health and safety file
- Should ensure that construction does not start until the construction phase is prepared



Roles and Responsibilities:

2. Designers:

- Avoid, when preparing a construction design, foreseeable risks to the health and safety of anyone who may:
 - Carry out construction work
 - Be affected by it
 - Be involved in maintenance or cleaning work.
 - Use a structure that has been designed as a workplace.

- Eliminate hazards/ reduce remaining risks and provide information about any aspect of the design, construction or maintenance of the structure to fully assist other parties in complying with their duties



Roles and Responsibilities:

3. Project Supervisor for Health and Safety Matters:

- Ensure co-operation and co-ordination of the health and safety aspects of the design and planning process.
- Advise the client on the adequacy of the risk control arrangements put in place by other parties.
- Provide assistance and advice on the appointment of competent contractors and designers.
- Facilitate good communication and co-operation between members of the project team.
- Ensure that the health and safety file is prepared, liaise with the principal contractor concerning its contents and ensure that it is handed over to the client at the end of the construction phase.
- Take the steps necessary to ensure that only authorized persons are allowed onto the construction site.
- Carry out as often as necessary a thorough inspection of the whole construction site and work practices to identify the measures being undertaken by the contractors, etc.



Roles and Responsibilities:

4. Principal Contractors:

- Take account of health and safety issues when submitting the tender.
- Prepare and review the construction phase plan that identifies the risks to health and safety arising from the work and the measures to address them.
- Co-ordinate the activities of all contractors to ensure that each complies with the construction phase plan. To this end, the principal contractor may give information, instructions, etc.
- Liaise with other contractors and the co-ordinator on the content of the health and safety file.
- Co-operate with the project supervisor for health and safety matters in the interest of occupational health and, or safety
- not commence and, or not progress any work related to the project before a project supervisor for health and safety matters has been appointed by the client



Roles and Responsibilities:

5. Other Contractors:

- Plan, manage and monitor their own work so that risks to health and safety are minimised.
- Take reasonable steps to ensure that work is carried out in accordance with the construction phase plan.
- Provide information for the health and safety file.
- Tell the principal contractor about any injuries or incidents.
- Provide information for the construction phase plan on risk assessments and control measures.
- Comply with site rules and emergency procedures.



Planning, Co-ordination and Notification:

One of the main factors responsible for the high accident rate in the construction industry is the complexity of the construction process and the need to carefully plan and co-ordinate the activities of the key players:
the client, designer, project co-ordinator, principal contractor and sub-contractor.



Planning, Co-ordination and Notification:

Key issues to consider:

- Emphasising the need for effective communication, co-ordination and co-operation between the different parties involved in a project.
- Requiring duty holders to establish the competence of appointees, and also to ensure their own competence before accepting any appointment.
- Requiring the principal contractor, and other contractors, to be informed of how much time is available for planning and preparation before work begins.

Planning, Co-ordination and Notification:

Key issues to consider:

- Requiring the client to take reasonable steps to ensure that the health and safety arrangements made by other duty holders are sufficient.
- Requiring designers to aim to eliminate hazards and reduce remaining risks.



Planning, Co-ordination and Notification: Key issues to consider:

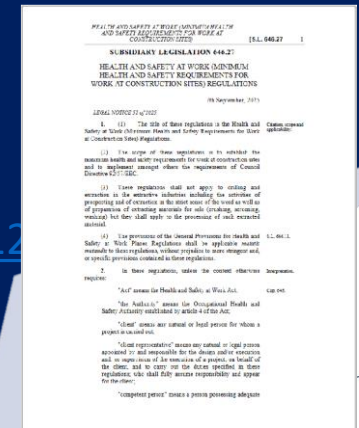
There is therefore a need to impose an effective safety management framework on construction work. The ILO Recommendation R175, Safety and Health in Construction, 1988 and the ILO Convention C167, Safety and Health in Construction, 1988 set out requirements that include the need to co-ordinate and manage construction activities, as well as particular standards for safe working procedures.

Locally all construction work must follow the Legal Notice 52 of 2025.

HEALTH AND SAFETY AT WORK (MINIMUM HEALTH AND SAFETY REQUIREMENTS FOR WORK AT CONSTRUCTION SITES)
[S.L. 646.27

<https://www.ohsa.mt/legislation>

https://normlex.ilo.org/dyn/nrmlx_en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312312



Construction Phase Plan:

Arrangements for ensuring the health and safety of all who may be involved in the construction work.

This should include:

- A description of standards to be achieved and project rules.
- Risk assessments.
- Method statements.
- Details of other control measures.
- Common arrangements.
- Emergency procedures.



Construction Phase Plan:

Arrangements for managing health and safety during the construction work and for monitoring compliance with legal requirements.

This should include:

- Organisation and responsibilities.
- Communication routes.
- Arrangements for information and training.
- How compliance with the plan and legal requirements will be monitored.



Construction Phase Plan:

Arrangements for managing health and safety during the construction work and for monitoring compliance with legal requirements.

This should include:

- Organisation and responsibilities.
- Communication routes.
- Arrangements for information and training.
- How compliance with the plan and legal requirements will be monitored.
- Information about welfare arrangements.



Health and Safety File:

This is a record of information for the client/end-user which informs those who might be responsible for the structure in the future of the risks that have to be managed during maintenance, repair or renovation.

The principal contractor needs to ensure that the health and safety file is prepared as the project progresses and given to the client when the project is complete.

The client should make the file available to those who will work on any future design, building, maintenance or demolition of the structure.



Health and Safety File:

The file should include:

- Drawings.
- Construction method details.
- Equipment and maintenance facilities.
- Maintenance procedures and requirements for the structure.
- Operation and maintenance manuals.
- Details of utilities, services, emergency and firefighting systems.





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