

GUIDANCE NOTES - CONSTRUCTION DESIGN AND MANAGEMENT (CDM)

ROLES AND RESPONSIBILITIES

The **CLIENT** must:

1. Be satisfied that all appointees are competent and will allocate adequate resources for health and safety.
2. Appoint a competent Planning Supervisor and provide him/her with all the information that is available about the site.
3. Appoint a competent Principal Contractor.
4. Appoint competent Designers (if the Client makes this appointment).
5. Make all reasonable enquiries about the safety implications of the site.
6. Allow sufficient time for the design and construction work to be carried out properly.
7. Ensure that the Health and Safety Plan is suitably developed prior to work commencing on site.
8. Keep the Health and Safety File after completion of the project.

In order to show that this has been done the following checks need to be made:

Check that the Planning Supervisor:

1. Has some relevant safety qualification or experience.
2. Has experience of construction work.
3. Has experience of design work.
4. Has knowledge of the risk assessment procedure.
5. Has the ability to co-ordinate designers.
6. Will make sufficient time available.
7. Has the ability to construct the initial Health and Safety Plan.
8. Is sufficiently independent to be able to do his job properly.

Check that the Principal Contractor:

1. Has a comprehensive Health and Safety Policy.
2. Can develop the Health and Safety Plan.
3. Has a system in place for assessing risks prior to construction work commencing.
4. Has a comprehensive set of site rules which all contractors must comply with.
5. Has a procedure for vetting contractors' health and safety performance.
6. Will regularly monitor work carried out by contractors in terms of health and safety.
7. Has a system in place for bringing the Health and Safety Plan to the attention of all contractors.
8. Has a procedure to ensure that only authorized persons are allowed on to site.
9. Has a mechanism in place for consultation on health and safety matters with Safety Representatives and employees of other contractors.
10. Can put in place proper arrangements for the safety induction of all those involved in, or affected by, construction work.
11. The organization is providing adequate resources for the management of health and safety in construction.
12. Can properly add to the Health and Safety File.
13. Has a procedure to ensure that subcontractors properly add to the Health and Safety File.

Check that the Designer:

1. Has a system in place to ensure that their designs meet applicable standards of health and safety.
2. Takes due account of the health and safety of those involved in the construction phase.
3. Takes due account of the health and safety of those involved in the future maintenance of the building.
4. Has a system in place to ensure that health and safety is reviewed at regular intervals during the development of the design.
5. Has a system in place to ensure that potentially hazardous substances are not specified within the design, and that all alternatives are fully considered.
6. Has a clear understanding of what information needs to be supplied to the Principal Contractor and Planning Supervisor for inclusion in the Health and Safety Plan and File.

Check that the history of the site has been researched, the site has been audited for safety implications and that all information discovered has been passed on to the Planning Supervisor.

The **PLANNING SUPERVISOR** must ensure that:

1. The HSE is notified of the project.
2. The Designer has taken into account the need for health and safety in the building, maintenance and repair processes.
3. The Health and Safety File is prepared.
4. They review, amend and add to the File as necessary.
5. They are able to give advice to the Client on the competence and allocation of resources by designers and ALL contractors.
6. They hand the Health and Safety File to the Client on completion.

DESIGNERS must:

1. Before starting design work, take reasonable steps to ensure that clients are aware of their duties under CDM.
2. Ensure that designs they prepare avoid risks to anybody carrying out construction or cleaning work in or on the structure at any time, and to anyone else who may be affected by the work, eg those who work in the building, customers or the general public.
3. Provide adequate information in or with the design, pointing out to whoever is preparing the Pre-Tender Health and Safety Plan any significant hazards that could not be designed out of the project and are not likely to be obvious to a competent contractor or other designer, unusual, or likely to be difficult to manage effectively.
4. Cooperate with the Planning Supervisor and other designers so that each can comply with their duties under CDM.

Designers have a legal duty to explain to the Client his responsibilities. No design work should be started until the client is aware of his duties under the CDM Regulations.

Designers must give due regard to health and safety in their design work. They must consider the potential effect of their design on the health and safety of those carrying out the construction work and others affected by the work. To do this they will need to assess the risks of their design which can reasonably be foreseen. Usually this will include risks to those building, maintaining or repairing the structure as well as those who might be affected by this work (e.g. members of the public). To ensure that risks to health and safety are fully considered in design work, designers will need to:

1. identify the significant health and safety hazards likely to be associated with the design and how it may be constructed and maintained;
2. consider if the hazard can be prevented from arising so that the risk can be avoided (e.g., alter the design to avoid the risk);
3. if this cannot be achieved, combat the risk at source (e.g., ensure the design details of items to be lifted include attachment points for lifting);
4. failing this, priority should be given to measures to control the risk that will protect all people (e.g., allow a one-way system for delivery and spoil removal vehicles);
5. only as a last resort should measures to control risk by means of personal protection be assumed (e.g., use of safety harnesses).
6. When considering health and safety in design work, designers are only expected to do what is reasonable at the time the design is prepared. It may be possible for hazards which cannot be addressed at the feasibility stage to be looked at during detailed design. In deciding what is reasonably practicable, the risk to health and safety produced by a feature of the design has to be weighed against the cost of excluding the feature.

Designers must provide adequate information about the health and safety risk of the design to those who need it. When design work has been carried out and the designer has concluded that there are risks which it is not reasonably practicable to avoid, information needs to be given about risks which remain. This information needs to be included with the design to alert others to the risks which they **cannot reasonably be expected to know**. This is essential for the parties who have to use the design information. For example, the Planning Supervisor who has to ensure the pre-tender stage Health and Safety Plan and the Health and Safety File are prepared, the Principal Contractor and other contractors who use the design information and the actual individuals carrying out the work. If basic design assumptions affect health or safety, or health and safety risks are not obvious from the standard design document, designers should provide additional information. The information should include a broad indication of assumptions about the precautions for dealing with the risks. This information could be included on drawings, in written specifications or outline method statements; however, it will need to be conveyed in a clear manner. The level of detail to be recorded will be determined by the nature of the hazards involved and the associated level of risk.

Designers must co-operate with the Planning Supervisor and, where appropriate, other designers involved in the project. Even on small projects it is unlikely that all the design work will be carried out by one designer. Therefore, designers will need to liaise with the Planning Supervisor and other designers so that the work can be co-ordinated to see how the different aspects of designs interact with each other and affect health and safety. Liaison is also needed so that the Planning Supervisor can ensure that designers are fulfilling their duties. Where there is an overlap in the design work, designers may need to exchange drawings and other design information which is relevant to health and safety. If a common format for the exchange of information is agreed or set down by the Planning Supervisor, this can help the process of co-operation. In addition, agreement will need to be reached to ensure that health and safety is considered, e.g. agreeing acceptable access arrangements for services in ducts and above ceilings.

The **PRINCIPAL CONTRACTOR** must:

Show that they have vetted other contractors for health and safety resource and found no problems, prior to letting work to any company. This might include:

1. Vetting the company for their health and safety record.
2. Checking the company's health and safety training records for both staff and management.
3. Checking the company's equipment maintenance procedures and records.
4. Checking the company's financial stability and insurance details.

Before any contractor gets on to site, the **principal contractor** must ensure that:

1. They understand the Health and Safety Plan;
2. Any risks not addressed by the Health and Safety Plan are brought to the attention of the principal contractor for inclusion in the Health and Safety Plan;
3. They have a system in place to discuss health and safety with their staff and their sub-contractors;
4. They have a system in place for collecting all the necessary information for inclusion in the Health and Safety File;
5. There will be a site safety induction training course.

Once any contractor gets on to site, the principal contractor will need to:

1. Monitor the on site safety circumstance;
2. Bring any defects to the contractor's attention;
3. Ensure that the contractor has put some form of corrective action into place (within an agreed time frame);
4. Keep the Health and Safety Plan up to date.

In addition, the **principal contractor** must ensure:

1. That there is a communication system to impart health and safety information to contractors (this is likely to be a regular site safety meeting with compulsory attendance);
2. That there is co-operation on safety matters between contractors;
3. That the site is secure and will not allow access to those who are not authorized to be on site;
4. Compliance with the Health and Safety Plan, any site rules and the health and safety legislation by the other contractors on site.

The **CONTRACTOR** must:

Prior to letting work to another contractor, show that they have vetted the company for health and safety resources and found no problems. This might include:

1. Vetting the company for their health and safety record.
2. Checking the company's health and safety training records for both staff and management.
3. Checking the company's equipment maintenance procedures and records.
4. Checking the company's financial stability and insurance details.

Before the contractor gets on to site the (employing) **contractor** must ensure that:

1. They understand the Health and Safety Plan;
2. Any risks not addressed by the Health and Safety Plan are brought to the attention of the principal contractor for inclusion in the Health and Safety Plan;
3. They have a system in place to discuss health and safety with their staff and their sub-contractors;
4. They have a system in place for collecting all the necessary information for inclusion in the Health and Safety File;
5. There will be a site safety induction training course.

Once the contractor gets on to site the (employing) **contractor** will need to:

1. Monitor the on-site safety circumstance;
2. Bring any defects to the contractor's attention;
3. Ensure that the contractor has put some form of corrective action into place (within an agreed time frame);
4. Add to the Health and Safety Plan as necessary (this will probably involve an ongoing risk assessment process).

In addition the **contractor** must ensure:

1. That there is a communication system to impart health and safety information to other contractors;
2. That there is co-operation on safety matters between contractors and the principal contractor (this will probably include the compulsory attendance at a regular site safety meeting);
3. Compliance with the Health and Safety Plan, any site rules and the health and safety legislation by the other contractors on site.

THE HEALTH AND SAFETY PLAN

The Health and Safety Plan will be in two phases. The Planning Supervisor will write the pre-tender Health and Safety Plan. This first version will include details of all risks (which a competent contractor would not be able to foresee) so far as is possible. It will be on this basis that the Principal Contractor will tender.

The Principal Contractor will then develop the plan into the construction phase Health and Safety Plan. It will now take into account any new factors that arise. It will define in some detail how the work will be done safely.

SUGGESTED HEALTH AND SAFETY PLAN CONTENTS

A description of the project	
A statement regarding health and safety on the project	
Information about the site and location	
The Management structure and responsibilities for the project	
System of communication/co-ordination with other contractors, and those arrangements	
Safety standards required	
Information to contractors re risks, risk identification and management	
Emergency procedures	
Arrangements for reporting of injury, disease and dangerous occurrences (RIDDOR)	
Arrangements for welfare	
Arrangements for training and informing people on site	
health and safety information/project specific and the display of statutory notices etc	
toolbox talks	
health and safety training, job and project specific	
Arrangements for consulting with the workforce on matters of health and safety	
Site rules	
Arrangements for collecting information for the Health and Safety File	
Arrangements for monitoring health and safety to achieve legal compliance and compliance with the Health and Safety Plan	
Arrangements for monitoring contractor selection and contractor management	
Project review	

Figure 1 Suggested Health and Safety Plan Contents

Competent method statements with their attendant risk assessments and training requirements will go some way towards the completion of the Health and Safety Plan.

ADDITIONAL SAFETY PLAN CONTENTS:

Safety Representation/Consultation

The appropriate arrangements for the consultation with all on site regarding health and safety need to be set out.

Training

The requirements for site induction training and responsibility for carrying out this training need to be defined. All other training requirements shall be identified from both the trade contractor and the principal contractor's risk assessments and method statements. No person on site shall be allowed to operate any piece of equipment or control any activity or enter any hazardous environment unless they have received the appropriate training.

Injuries, Diseases and Dangerous Occurrences

The procedures for the reporting of injuries, diseases and dangerous occurrences, both to the enforcing authority and to the principal contractor, shall be defined. So shall the investigation procedures in order to identify any shortcomings in the system of safety control and hence be able to prevent any recurrence.

Welfare and First Aid Facilities

Arrangements shall satisfy the Construction (Health, Safety & Welfare) Regulations, 1996. It is incumbent upon each employer to ensure that the necessary facilities are made available to his/her own employees. The self-employed must likewise ensure that at least the minimum facilities are available for themselves.

Protective Clothing and Equipment

The provision of the appropriate items of PPE shall be defined together with arrangements for storage, maintenance and drying of PPE. All trade contractors shall be responsible for ensuring that each of the operatives, all staff, any delivery drivers and other visitors to site shall be properly equipped with the PPE.

Permits to Work/Enter

Any process or operation requiring a permit to work/enter shall be identified from the risk assessments and a system of formal issue and monitoring established.

Safe Access and Safe Places of Work

The responsibilities and procedures for dealing with access problems common to all contractors and with inter-contractor disputes on matters of health, safety and welfare shall be defined.

Fire Precautions

The responsibilities for the provision, maintenance and the training of employees in the use of the appropriate fire fighting equipment shall be defined. The principal contractor shall arrange these procedures.

Emergency Procedures

The procedures for the action to be taken in the event of fire, toxic fume release, rescue from confined space, major accident or injury, etc. shall be defined by the principal contractor and clearly displayed for all persons on site. These arrangements shall form part of the induction training.

Housekeeping

Agreed arrangements shall be made for the storage of materials, the cleaning of the workplace and removal of waste.

Site rules

Site rules shall be determined, to include, where appropriate, client's rules. Copies of the site rules shall be issued to all contractors. Every trade contractor shall be responsible for enforcing these to their own staff and any person on site at their invitation.

The Health and Safety File

Arrangements shall be defined for the inclusion of all relevant information in the Health and Safety File.

THE HEALTH AND SAFETY FILE

The Health and Safety File will start life at the beginning of the design process and progress throughout the life of the building.

The intention is that the Health and Safety File will include any information that will have an impact upon the health and safety of any person carrying out future construction maintenance or repair work on the structure.

It will be started by the planning supervisor in conjunction with the designers, be amended during the construction phase, and then returned to the client via the planning supervisor.

It will include:

1. Information on carrying out construction, work records, drawings, plans, design specifications and criteria.
2. Detailed methods and materials used in construction.
3. Maintenance procedures and requirements.
4. Manuals produced by specialist sub-contractors.
5. Details of utilities, services and emergency procedures.

PRE-CONTRACT APPRAISAL

The following steps shall be taken, prior to work starting on site:

1. The pre-tender Health and Safety Plan, contract documents, drawings and specifications shall be examined to establish any constraints which may affect the site layout or construction methods, such as:
 - Relationship of the site to physical features such as roads, railways, flight paths, lakes and rivers, overhead and underground services, adjacent structures;
 - Environmental considerations such as noise, dust, fumes, etc;
 - The nature of the site in relation to existing buildings and their previous or present usage, contaminated ground, water levels, water courses, mining activities, and physical boundaries;
 - Any safety control requirements laid down in the contract by the client, e.g. safety, first aid or fire training, management training, professional site safety evaluations.
2. Determination of the logical sequence of work, identification of any high risk operations, hazardous processes, etc such as demolition, site clearance, or construction operations.
3. Determination of the types and capacities of plant and equipment required and the need for adequately trained operators such as:
 - Access equipment;
 - Lifting appliances and lifting gear;
 - Site transport and mobile plant;
 - Power supplies;
 - Workshops.

4. Determination of the requirements for temporary accommodation such as:
 - Offices;
 - Welfare and first aid facilities. The scope of these facilities will depend on the type of work being undertaken, the duration of that work, the number of employees on the site, the weather conditions expected during the work and the location of the site, in relation to the facilities already present in the area;
 - Consideration is to be given, in all cases, to the provision of the following with reference to The Construction (Health, Safety and Welfare) Regulations, 1996:
 - Toilets;
 - Washing facilities;
 - Drying rooms for wet clothing;
 - Changing facilities;
 - Messing facilities, Canteens.
5. Determination of the requirements for storage areas.
6. Definition of site areas for:
 - Material, plant and emergency services access;
 - Fixed plant;
 - Mobile plant;
 - Pre-fabrication areas;
 - Temporary accommodation;
 - Material storage.
7. Determination of the measures required for protection of the public and site security.
8. Carry out risk assessments and combine with the foregoing material to create the **Construction Phase Health and Safety Plan**.