







Guidelines on the

Procurement, Design and Management
Requirements of the Safety Health and
Welfare at Work (Construction)
Regulations 2006



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## Introduction

This guidance is issued by the Health and Safety Authority. Following the guidance is not compulsory and you are free to take other actions to achieve compliance. But if you do follow the guidance you will normally be doing enough to comply with the law. Health and Safety Authority inspectors seek to secure compliance with the law and may refer to this guidance as illustrating good practice and compliance.

These guidelines aim to give practical guidance to clients, designers, project supervisors, contractors, and workers on how they can comply with the design and management aspects of the Safety, Health and Welfare at Work (Construction) Regulations 2006 (S.I. No. 504 of 2006), which are referred to in these guidelines as "the Construction Regulations 2006".

Regulations 1 to 29 of the Safety, Health and Welfare at Work (Construction) Regulations 2006 transpose Council Directive 92/57. These guidelines refer to those Regulations which are concerned with the duties on clients, designers, project supervisors, and the general duties of contractors. The Regulations are aimed at protecting workers from accidents and ill heath in the construction industry. They apply to all forms of construction work but the client's duties only apply to construction work undertaken in the course of trade, business, or other undertaking.

The guidelines aim to clarify important issues such as the roles of the various duty holders, how to assess competence and resources, how to prepare Safety and Health Plans, and what should be in the Safety File.

The Regulations were made under the Safety, Health and Welfare at Work Act 2005 and the provisions of the 2005 Act, the Safety, Health and Welfare at Work (Work at Height) Regulations 2006 (S.I. No. 318 of 2006) and the Safety, Health and Welfare at Work (General Applications) Regulations, apply to all construction projects. A range of other Regulations also apply to construction projects, including Regulations relating to chemical agents, asbestos, lifting equipment, noise, vibration, optical radiation, electricity, manual handling, work equipment, and workplace conditions.

The Safety, Health and Welfare at Work (Construction) Regulations 2001 are revoked except for the provisions dealing with Lifting Equipment etc, and Project Supervisors Design Stage and Project Supervisors Construction Stage who were already appointed to projects before the coming in to force of the Construction Regulations 2006 on 6 November 2006. The existing Construction Regulations dealing with lifting equipment (Regulations 80 to 123 of the Safety, Health and Welfare at Work (Construction) Regulations 2001 (S.I. No. 481 of 2001) will be replaced by new Lifting Equipment Regulations in due course.

The construction industry covers a wide range of activities, hazards, materials techniques, employment patterns, and contractual arrangements. In such circumstances, if safety and health standards are to improve, good management of construction projects is essential from concept through to design, construction, use, and eventual demolition. Poor management of the design or construction process is a prime cause of most of the deaths, injuries, and illness in the construction industry.

The main types of accidents causing death during construction activities are: falls from a height, site vehicles, falling or collapsing material (including trench accidents), and contact with overhead electricity lines. Non-Irish national workers have a very high fatality rate compared to Irish national workers.

Workers in the construction sector suffer from one of the highest non-fatal injury rates of any sector. The most common types of non-fatal injuries are: manual handling slips trips and falls on the level, falling or collapsing material, and falls from a height.

The most common items associated with non-fatal injuries are temporary working platforms, scaffolds, and ladders.

Most serious accidents can be avoided by good design, good planning, and the use of tried and tested techniques for building safely.

Actions taken at an early stage of the design process have a significant potential to reduce the level of risk on construction projects. Good co-ordination of activities and co-operation between all parties during design and construction is essential in reducing the high levels of risk found on many construction projects.

Regulations 6 to 29 in particular aim to improve safety and health in the construction industry by focusing on planning, management and co-ordination, and by establishing a chain of responsibility from the client through to the contractor and to each individual employee.

## Part 1. Interpretation and General

#### 1.1 Citation and Commencement

These Regulations may be cited as the Safety, Health and Welfare at Work (Construction) Regulations 2006.

These Regulations came into operation on 6 November 2006 called the "effective date" and they apply to all new projects initiated from this date.

In the case of existing projects where a Project Supervisor Design Stage and a Project Supervisor Construction Stage have been appointed under the Construction Regulations 2001 and 2003, then some revocations do not apply immediately.

In the case of a Project Supervisor Design Stage, if, prior to the effective date of the Construction Regulations 2006:

- a design stage has commenced,
- a project supervisor for the design stage has been appointed in accordance with the Construction Regulations 2001 and 2003, and
- holds that position on the effective date of the Construction Regulations 2006,

then all duties of the client in relation to the appointment of a Project Supervisor Design Process and all duties assigned to the Project Supervisor Design Process apply at the Clients Discretion only from 18 months after the coming into operation of the Construction Regulations 2006 (i.e. from 6 May 2008).

If the client has appointed himself or herself as Project Supervisor Design Stage under the Construction Regulations 2001 and 2003, the duties specified for the Project Supervisor Design Process in the Construction Regulations 2006 apply at the Clients Discretion only from 18 months after the coming into operation of the Construction Regulations 2006.

If, after this 18-month period, a client wishes to seek exemption from the duty to appoint a Project Supervisor Design Process, the client may do so by making an application to the Authority on an approved form outlining the reasons for the exemption and the length of time for which the exemption is sought.

The Authority may grant an exemption for a maximum period of 30 months after the coming into operation of the Regulations.

In the case of a Project Supervisor Construction Stage, if prior to the effective date the Construction Regulations 2006, and where:

- a Project Supervisor Construction Stage has been appointed,
- notification has been given to the Authority, in accordance with the Construction Regulations 2001 and 2003, and
- holds that position on the effective date of the Construction Regulations 2006,

then all duties of the client in relation to the appointment of a Project Supervisor Construction Stage in the Construction Regulations 2006 and all duties in those Regulations on the Project Supervisor Construction Stage apply only from 18 months after the coming into operation of the Construction Regulations 2006 (i.e. from 6 May 2008).

If the client has appointed himself or herself as Project Supervisor Construction Stage under the Construction Regulations 2001 and 2003, the duties specified for the Project Supervisor Construction Stage in the Construction Regulations 2006 apply only from 18 months after the coming into operation of the Construction Regulations 2006.

It should be noted that there is nothing to prevent a client from appointing a Project Supervisor Design Stage (PSDS) as a Project Supervisor Design Process (PSDP) or from appointing a Project Supervisor Construction Stage (PSCS) with the duties under the Construction Regulations 2006 once those Regulations come into operation.

Due to the phasing-in arrangements of these Regulations there may be occasions where a Project Supervisor Design Stage appointed under the Construction Regulations 2001 and 2003 and a Project Supervisor

Construction Stage appointed under the Construction Regulations 2006 exists. In these cases there are some requirements, e.g. safety file and temporary works that will remain with the Project Supervisor for the Construction Stage.

New Construction Skills Certification Scheme Requirement.

Schedule 4 lists a number of new CSCS tasks. These are:

- · Mobile tower scaffold;
- Self erecting tower crane operation;
- Mini-digger operation;
- Signing, lighting and guarding on roads;
- · Locating under-ground services;
- Shotfiring.

These new CSCS requirements come into operation 18 months after the effective date of these Regulations (i.e. from 6 May 2008).

#### 1.2 Interpretation

This section deals with the definitions of terms used within the Regulations, unless the context otherwise requires:

"Act" means the Safety, Health and Welfare at Work Act 2005 (No. 10 of 2005);

"Act of 1875" means the Explosives Act 1875;

"Client" means a person for whom a project is carried out, in the course or furtherance of a trade, business or undertaking, or who undertakes a project directly in the course or furtherance of such trade, business, or undertaking;

"Construction site" means any site at which construction work in relation to a project is carried out.

"Construction stage" means the period of time starting when preparation of the construction site begins and ending when construction work on the project is completed. The construction stage is that period of a project when the construction work is undertaken. It includes site preparation (including demolition). The definition also encompasses fitting-out or commissioning work. However, repairs and remedial work carried out after completion of the project would be regarded as a separate project.

"Construction work" means the carrying-out of any building, civil engineering or engineering work other than drilling and extraction in the extractive industries, and includes but is not limited to each of the following:

- associated preparations, cleaning, maintenance (including repair, renovation, upkeep, and redecoration), demolition and dismantling of structures;
- installation, commissioning, decommissioning or dismantling of fixed plant (e.g. silos, chemical reactors, boilers, air-conditioning units, lifts, and telecommunications) that would involve a risk of a person falling more than two metres. Plant includes any machinery, equipment or appliance (in this context fixed plant would mean plant that is fixed in one position and is not intended to be moved frequently);
- installation, commissioning, maintenance, repair or removal of mechanical, electrical, gas, compressed air, hydraulic, telecommunications systems, computer systems, or similar services which are normally fixed within or to a structure; exploratory site preparation work, including drilling bore holes (but not site surveys);
- the construction of temporary structures during construction work (e.g. formwork, falsework, scaffolds or similar support or access structure).

Construction work is very broadly defined; the Regulations apply to construction projects involving people at work.

The Regulations apply to all demolition and dismantling work, including the deliberate pulling down, destruction, or taking apart of a structure, or a substantial part of a structure, or the dismantling of a structure for re-use.

#### "Contractor" means:

- (a) a contractor or an employer whose employees undertake, carry out or manage construction work, or a person who:
  - (i) carries out or manages construction work for a fixed or other sum, and
  - (ii) supplies materials, labour or both, whether the contractor's own labour or that of another, to carry out the work.

Contractor means any employer whose employees carry out construction work. It includes both the main contractor and sub-contractor. Contractor also includes a self-employed person. It also includes a person who supplies materials and labour or labour only, including the labour of another person.

"Contractor responsible for a construction site" includes a contractor responsible for part of the site, in relation to the part for which that contractor is responsible and has control over.

"Design" means the preparation of drawings, particulars, specifications, calculations, and bills of quantities insofar as they contain specifications or other expressions of purpose, according to which a project, or any part or component of a project, is to be executed. Design includes the preparation of bills of quantity only insofar as they specify articles, substances, or other particulars.

"Design process" means the process for preparing and designing a project, including alterations to the design and the design of temporary works to facilitate construction of the project.

"Designer" means a person engaged in work related to the design of a project.

"Directions and Rules": where, under these Regulations, a person is required to give directions or make rules, such directions and such rules shall be reasonable in the context of the duty with which the person is required to comply.

"Project" means an activity which includes or is intended to include construction work. A project includes all associated preparation, design, planning, and construction work. Several structures may be involved in a single project. Where the work is phased, with significant and substantial periods of time in between the phases, it may be appropriate to consider each separate phase as an individual project. An example of this would be a demolition operation far in advance of further site work. It may also be appropriate to use this approach on complex or lengthy projects that pass though several distinct stages, each requiring a specialist managerial input. Where structures are being constructed in different locations with separate sites and access and egress points and where there is minimal interaction between the work of each site, it may be appropriate to consider each separate site as an individual project.

"Project supervisor" means an individual or a body corporate appointed under Regulation 6(1) and responsible for carrying out:

- (a) the appropriate duties specified in these Regulations, and other duties that are -
  - (i) necessary to allow the client to comply with section 17(1) of the Act.

The appointed Project Supervisors must be a legal entity such as an individual or a company.

While a project supervisor may be an individual, it is more common that it is a company. Unincorporated joint ventures or partnerships may not necessarily be legal entities. For the purposes of the Regulations, both the Project Supervisor Design Process and Project Supervisor Construction Stage are required to be a legal entity either in the form of an individual or a body corporate.

#### "Structure" means:

(a) any building, railway line or siding, tramway line, dock, harbour, inland navigation, tunnel, bridge, viaduct, waterworks, reservoir, pipe-line (whatever it contains or is intended to contain), underground or overground cables, aqueduct, sewer, sewage works, gasholder, road, airfield, sea defence works, river works, drainage works, earthworks, lagoon, dam, wall, caisson, mast, tower, pylon, underground tank, earth-retaining element or assembly of elements, or element or assembly of elements designed to preserve or alter any natural feature, and any other structure similar to the foregoing,

- (b) any formwork, falsework, scaffold or other element or assembly of element designed or used to provide support or means of access during construction work, or
- (c) any fixed plant in respect of work which is installation, commissioning, de-commissioning or dismantling.

This definition of is very broad and needs to be read in conjunction with the definitions of "construction work" and "project".

Among the items listed as structures are pipelines or cables feeding a building. These are separate structures under this definition, and as such, any maintenance, repair or other work carried out on such pipelines or cables is construction work.

While service pipes or cables within a building would not be regarded as separate structures, any maintenance or other work on them is construction work as they are part of the services within the building (see paragraph (c) under definition of "construction work").

"The Client is required under Section 17(1) of the Safety, Health and Welfare at Work Act 2005 to appoint competent person or persons for the purpose of ensuring so far as is reasonably practicable, that the project –

- (a) is designed and is capable of being constructed to be safe and without risk to health,
- (b) is constructed to be safe and without risk to health,
- (c) can be maintained safely and without risk to health during subsequent use, and
- (d) complies in all respects, as appropriate, with the relevant statutory provisions."

The appointments under section 17 of the 2005 Act will generally mirror the requirement to appoint a competent Project Supervisor Design Process (PSDP) or Project Supervisor Construction Stage (PSCS) and the duties in section 17(1) are in addition to the duties in the Construction Regulations 2006.

For the purpose of the Construction Regulations 2006 "reasonably practicable" in relation to the duties of any person or organisation, means that person or organisation has exercised all due care by putting in place the necessary protective and preventive measures appropriate to their level of involvement, having identified the hazards and assessed the risks to safety and health likely to result in accidents or injury to health at the place of work concerned and where the putting in place of any further measures is grossly disproportionate having regard to the unusual, unforeseeable and exceptional nature of any circumstance or occurrence that may result in an accident at work or injury to health at that place of work.

For the purpose of the Regulations, "competence" means a person or organisation is deemed to be competent where, having regard to the task he or she is required to perform and taking account of the size or hazards (or both of them) of the undertaking or establishment in relation to which or in which the person or organisation undertakes work, the person or organisation possesses sufficient training, experience and knowledge appropriate to the nature of the work to be undertaken.

For the purposes of compliance with the Regulations, to "co-ordinate" means to put in place systems that operate effectively so that information flows freely between duty-holders. Monitoring and corrective systems must be in place to ensure effective co-ordination between duty-holders.

Information needs to flow freely between designers and on to the contractor as necessary. For example, monitoring and checking of the activities of designers in relation to the taking account of the general principles of prevention, or the different activities of contractors on site, is necessary so that potential conflicts that could affect safety and health are anticipated and resolved.

## 1.3 Keeping of Records

The contractor must keep all records, reports, certificates and other documents on the relevant site. Where there is no work taking place at the site, they may be kept at either the relevant contractor's office or, in the case of plant and equipment, be kept at the office of the owner of the plant or equipment.

Where a contractor has reasonable grounds to believe that the work will take less than 30 days, the records, certificates, and other documents may be kept at the contractor's office.

Persons who hold records, reports, certificates, and other documents must make them available for inspection by an inspector of the Health and Safety Authority and, in addition, when requested by an inspector the person holding the records must send copies of them or extracts from them to the inspector.

Records, reports, certificates, and other documents may be entered in an approved form in a computer and should be authenticated as soon as possible after their entry.

Where under the Regulations a designer is required to make and keep records, reports, certificates, and other documents, they may be kept in a computer.

#### 1.4 Application

The Regulations apply to, and in relation to, construction work.

Schedule 3 to the Construction Regulations 2006, which relates to the Safety Awareness Scheme, applies to:

- · craft and general construction workers;
- persons undertaking on-site security work;
- persons or classes of persons as may be prescribed by the Minister.

Schedule 3 does not apply to a person involved in the installation, commissioning, maintenance, repair, or removal of mechanical, electrical, gas, compressed air, hydraulic and telecommunication systems, computer systems, or similar services where:

- · the person is normally domiciled outside the State;
- the person's normal place of employment is outside the State;
- the person has not been working on the project for a period in excess of 20 working days in any 12-month period.

Such persons must have a letter from their employer, written in either English or Irish and containing the following information:

- a description of the work to be undertaken;
- the competency of the worker to undertake the work;
- the commencement date and the anticipated completion date of the work.

Regulation 86(1)(e), which relates to the installation of auxiliary devices for improved vehicle visibility, applies to:

- all vehicles in use immediately before the commencement of these Regulations from 18 months after their coming into operation;
- all vehicles first used after the commencement of these regulations from six months after their coming into operation.

In circumstances where the operator's visibility is restricted, auxiliary devices as listed in Schedule 6 of the Construction Regulations 2006 must be installed to improve visibility, unless a risk assessment shows that the auxiliary devices are not required. For all vehicles first used after the coming into operation of these Regulations, these requirements come into operation on 6 May 2007. For all vehicles in use immediately before the coming into operation of the Regulations, these requirements come into operation on 6 May 2008. Schedule 6 is reproduced in Appendix 5 to this Guidance.

## Part 2. The Client

## 2.1 Summary of Duties of the Client

## The Client must:

- appoint, in writing before design work starts, a project supervisor for the design process (PSDP) who has adequate training, knowledge, experience, and resources;
- appoint, in writing before construction begins, a project supervisor for the construction stage (PSCS) who has adequate training, knowledge, experience, and resources;
- be satisfied that each designer and contractor appointed has adequate training, knowledge, experience, and resources for the work to be performed;
- co-operate with the project supervisor and supply necessary information;
- retain and make available the Safety File for the completed structure. The Safety File contains information on the completed structure that will be required for future maintenance or renovation;
- provide a copy of the safety and health plan prepared by the PSDP to every person tendering for the project. The Safety Plan documents how health and safety on the project will be managed up to project completion;
- notify the Authority of the appointment of the PSDP where construction is likely to take more than 500 person days or 30 working days
- These duties do not apply to you if:
  - o you commission or procure a project in relation to your domestic dwelling; and
  - o The project is not for the purpose of a trade or other undertaking.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

#### 2.1.1 What is a "Client"?

A client is a person or company for whom a project involving construction work is undertaken for the purposes of trade, business or undertaking. The client usually has effective control over key aspects of the project such as the control over who is appointed as:

- · the designers of the main elements of the project;
- the Project Supervisor Design Process;
- the Project Supervisor Construction Stage; and
- the Contractor or Contractors who will undertake or manage the main elements of the project.

The Client is the person or company with the controlling interest in the project. Generally, the client will retain a significant level of control over the appointment of other designers and contractors appointed for that project.

Persons who commission work on their private domestic premises are not "clients" under the Regulations, because the project does not relate to a trade, business or undertaking. If, however, the building under construction or modification is to be used for trade or business, e.g. a guesthouse, then the duties on clients under the Construction Regulations 2006 apply. Similarly, work on a domestic premises owned by a housing association, landlord, or local authority would be regarded as being for the purposes of trade, business or undertaking, and the owner would be considered to be a client within the meaning of the Regulations. The determining factor is the status of the client rather than the type of property under construction.

The definition of *client* encompasses those in effective control of large undertakings commissioned by a local authority, and relatively small projects such as an extension to a local shop. Clearly, the resources available to the former will outweigh those open to the latter.

## 2.1.2 Clients: Small Construction Projects

There are also likely to be great disparities in experience and in-house expertise and competence of clients. Many clients may be functioning in that capacity for the first time. It is particularly important that less experienced clients are careful in their choice of those appointed as the Project Supervisor Design Process (PSDP) and the Project Supervisor Construction Stage (PSCS), as they will have a greater need to rely on the competence of those duty-holders, particularly in terms of the advice that may be given to them by those professionals.

## **EXAMPLE OF A CLIENT ON A SMALL CONSTRUCTION PROJECT:**

A shop owner sought to extend his comparatively small retail premises. He had never been involved in a construction project before, nor did he have any knowledge of the Regulations. The architect who was commissioned to design the extension briefed the shop owner on the implications of the Regulations as part of his professional service to the client. The architect then agreed to assume the role of Project Supervisor Design Process, and was then in a position to advise the client on the choice of building contractor. The contractor selected was appointed Project Supervisor Construction Stage.

What do Clients of Small Projects Need to Know?

#### **Duties:**

- Appoint a competent and adequately resourced Project Supervisor Design Process before the start of any design work.
- Check the competence and resources of the PSDP by asking for:
  - o experience of carrying out similar projects;
  - o safety and health training or qualifications;
  - o the resources that they intend to use on the project;
  - o evidence of good safety record, e.g. accidents, Notices issued by the Authority and any prosecutions.
- Appoint a competent and adequately resourced Project Supervisor Construction Stage.
- Check the competence and resources of the PSDP by asking for:
  - o experience of carrying out similar projects;
  - o safety and health training or qualifications;
  - o the resources that they intend to use on the project;
  - o evidence of good safety record, e.g. accidents, Notices issued by the Authority and any prosecutions.
- Co-operate with the Project Supervisors:
  - o give them any information you have in relation to the state or condition of a structure or of the site;
  - o if there is a Safety File give it to the PSDP;
  - o set a realistic time frame for completion of the project, as rushing a project can lead to accidents.
- If the project is going to take longer than 30 days or 500 person days, then the Client must notify the Authority of the appointment of the PSDP and if at this time you know who the PSCS is, include this information in the Notification.
- Provide or arrange to have provided a copy of the Safety and Health Plan given to all those being considered for, or tendering for the role of I Project Supervisor for the Construction Stage.
  - o the PSDP has to prepare on a preliminary basis a Safety and Health Plan. The easiest way to ensure that it is included in the tender documentation for the post of PSCS is to instruct the PSDP to include it in the tender documentation.
- Keep the Safety File that the PSDP will give you when the project is completed.

Clients of small projects or persons who have never been a Client before can seek advice from the Designer in relation to their duties.

## 2.1.3 Clients Carrying out Routine Maintenance Projects

## **EXAMPLE 1:**

A small supermarket owner wants to carry out routine maintenance work on his premises, such as repairs to, and changing of light fixtures which are located down the centre or each aisle.

The Regulations state that for routine maintenance work such as cleaning, decorating and repair within or to a structure, Project Supervisors for the Design Process and for the Construction Stage do not have to be appointed, so long as:

- the work does not involve a particular risk referred to in Schedule 1 to the Regulations;
- there is only one contractor involved in doing the work;
- the work is not notifiable to the Authority, i.e. the project does not last longer than 30 days or 500 person days.

#### Schedule 1 to the Construction Regulations 2006

Non-exhaustive List of Work Involving Particular Risks to the Safety, Health and Welfare of Persons at Work

- 1. Work which puts persons at work at risk of -
  - (a) falling from a height,
  - (b) burial under earthfalls, or
  - (c) engulfment in swampland,
  - where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or construction site.
- 2. Work which puts persons at work at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving a statutory requirement for health monitoring.
- 3. Work with ionising radiation requiring the designation of controlled or supervised areas as defined in Article 20 of Directive 80/836/Euratom.
- 4. Work near high voltage power lines.
- 5. Work exposing persons at work to the risk of drowning.
- 6. Work on wells, underground earthworks and tunnels.
- 7. Work carried out by divers at work having a system of air supply.
- 8. Work carried out in a caisson with a compressed-air atmosphere.
- 9. Work involving the use of explosives.
- 10. Work involving the assembly or dismantling of heavy prefabricated components.

In the above example, the routine maintenance involves working at height but in this case it is not a particular risk as the light fixtures are easily accessible and the working at height element of the activity is not aggravated by the environment of the workplace.

What do Clients of Routine Maintenance Projects Have to Do?

- Appoint a competent and adequately resourced contractor to carry out the work.
- Check the competence and resources of the contractor by asking for:
  - o experience of carrying out similar projects;
  - o safety and health training;
  - o Safe Pass safety awareness card(s);
  - o the resources that they intend to use on the project, including equipment;
  - o evidence of good safety record, e.g. accidents, Notices issued by the Authority and any prosecutions.

## **EXAMPLE 2: CLIENT CARRYING OUT ROUTINE MAINTENANCE WORK PROJECT:**

The owner of a hotel wishes to carry out routine maintenance work such as repairs to, and changing of light fixtures which are located in the ceiling of the atrium of the reception area. The only possible access to the light fixtures is off a balcony using a rope positioning systems.

In this example, the work involves work at height which is aggravated due to the positioning of the lights and the process by which the work must be done. Project supervisors must be appointed.

When more than one organisation is involved in a project, it is particularly important that each organisation has a common understanding of who the Client is. The Client for the purposes of the Regulations is the person or organisation who commissions or procures the project, and who is in effective control over key aspects of the project.

#### 2.1.4 Who is a Client?

#### **EXAMPLE OF WHO IS A CLIENT:**

A developer funded improvements and alterations to a motorway as part of a major shopping development. The improvements had to satisfy the requirements of the local authority. In this case the developer engaged all the contractors and was the only Client.

The use of Engineer-Procure-Construct (EPC) and Design-Build (DB), or variations of this type of arrangement as a project delivery method, has increased significantly (and may increase further) in both the public and private sectors.

The movement away from the typical "design/bid/build" method to EPC and DB has altered the traditional relationships between the owner, the owner's representative, the architect/engineer, the construction manager, and the contractor. These altered relationships have shifted the responsibilities assumed by each party as compared to traditional construction contracts.

The identity of the Client for these new forms of contract varies depending on the type of project and contract. There may be more than one Client or there may be different Clients for different stages of the project. The type of project involved will determine how the Regulations apply.

Some examples of the type of situations that might arise with different types of contract are outlined below.

Design/Bid/Build: This is where a Client employs designers to specify and design:

- a new facility; or
- the maintenance works for an existing facility.

A contractor is then employed to manage the construction work. This is generally considered as the traditional approach to the commissioning of a construction project. The Client in this case is the person who commissions or procures the carrying out of the project.

Design and Build and Operate: Design and Build and Operate construction contracts have become more widespread recently. There are generally variations to this type of contract, one of which is dealt with below.

"Works not Designed by the Body Commissioning the Project" is where a number of companies are invited to compete for the complete design, construction and operation of a project in a tender competition. The main component in the tender documents is the output specification. The focus of this material is on what the end product needs to be rather than on the specifics of how it is delivered. The output is the end user requirements, or what is actually consumed by users of a service rather than the facility used to provide the service. At a minimum it is a statement of the essential functional and operational requirements that need to be put in place to enable a service to be provided. The output specification may be expressed in a combination of diagrammatic, textual, and numerical terms. The diagrams identify client constraints within which designs must be developed. The person commissioning the preparation of the specifications is a Client and must appoint a PSDP.

During the proposal stage, designers would be employed by each different entity tendering for an individual proposal. These tendering companies would be Clients and would appoint a PSDP for their proposal. The Body selected to develop the project may, on appointment, be given effective control over the design and construction of the project and as a Client proceed to appoint a PSCS at the appropriate time prior to construction work commencing on site.

Where there are a number of Clients, the Regulations allow for one or more of the Clients to elect to be treated solely as the Client for the purposes of the Regulations. This must be agreed in writing, and once agreed the other Clients are exempt from further ongoing duties, except the duty of Clients to keep available the safety file and any information in relation to the safety File (Regulations 8 (1) and (3)).

#### 2.1.5 Duties of Clients and Others

#### "Regulation 6

- 6.(1) Except as provided for in paragraphs (5) and (6), a client shall appoint, in writing, for every project
  - (a) a competent project supervisor for the design process, and
  - (b) a competent project supervisor for the construction stage and the client shall obtain written confirmation of acceptance of each of the appointments."

In order to co-ordinate the design and construction work being undertaken, the Client must put in place persons or organisations to oversee the co-ordination of the design and construction work. These appointees are called the Project Supervisor Design Process (PSDP) and the Project Supervisor Construction Stage (PSCS). The appointment of the PSDP and PSCS by the Client must be in writing with a written acknowledgement from the chosen candidates that they accept the appointment. Any changes that are made to these appointments must be formally made in writing and acknowledged by the new appointees in writing.

The Client should keep copies of these appointments on file. There can only be one Project Supervisor Construction Stage for one project at a given time. This requires that where various types of construction work overlap (geographically and in time) on a site, one Project Supervisor Construction Stage should be appointed for this work, and the work should be considered part of one project.

Sometimes two or more developments take place on a site at the same time. This can happen if different clients commission adjacent work or if a client procures two unrelated packages of work In the context of the Regulations, there is more than one project on site only if the packages of work are truly independent and do not interact with each other to any significant degree, or rely upon one another for their stability or completion. Where there is clearly more than one project, there can be more than one PSCS or PSDP.

#### 2.1.6 Competence

When making the appointments of Project Supervisors, it is essential that the Client is as satisfied as he or she can reasonably be that those appointed are competent to carry out the duties set out for them in these Regulations.

The Client is obliged to make reasonable enquires regarding the competence of those proposed to be appointed. Assessment of the responses to any enquiries made needs to be guided by common sense and, where appropriate, professional advice. The professional bodies in the construction industry may be in a position to offer advice as regards the essential qualifications and training required.

In large scale projects, or where panels of contractors are used, a prequalification procedure might be an integral part of the enquiry into competence of certain potential appointees.

When assessing competence, the following general guidelines should be considered:

- Only those competencies and resources that relate to the duties of the person being assessed need to be considered;
- The matter to be considered is the capacity of the person being assessed to comply with the duties that they would carry under the Regulations;
- The assessment should relate to the project under consideration but may also focus on previous projects executed and experience gained elsewhere;
- The assessment should be proportionate and should concentrate on the main issues, rather than being generic;
- It follows that a relatively minimal assessment should suffice for what will clearly be a relatively lowrisk project;
- An extensive assessment should not be necessary when dealing with a person whom you have recently subjected to the process on a similar project;
- Past performance on safety and health, including accidents reported to the Health and Safety Authority, enforcement record, and previous remedial actions should inform the assessment;
- A good guide should be a proven track record of competence within the duty-holder's field.

#### 2.1.7 Assessment of Competence

**Project Supervisor Design Process:** The Client or other person will need to make reasonable enquires to check that the person or company to be appointed is able to fulfil the responsibilities of the position. These reasonable enquiries might take the form of enquiries to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee, members of the proposed appointee's team, etc. The client may need to seek professional advice from industry bodies. The extent of these enquiries will depend on the scale, complexity and the hazards of the project and may include enquiring about the following:

- Membership of professional body;
- Knowledge of design and construction, particularly in relation to the nature of the project;
- Safety and Health qualifications, training (e.g. degree, diploma, certificate, continual professional development);
- Safety and Health experience on similar projects:
  - o experience of co-ordinating the activities of different designers and acting as a liaison between the design function and the construction work on site;
  - o experience of preparing a Safety and Health Plan;
  - o knowledge of preparing a Safety File.
- Sufficient staff with qualifications, training and experience, both within the company and from other sources, relevant to the project;
- Evidence of a functioning safety management system, including:
  - o is there an up to date Safety Statement?
  - o are individuals identified with responsibility for safety and health for each project?
  - o is there evidence of corrective actions, learning from past experience?
  - o is there evidence of a Safety Management System such as that detailed in the Health and Safety Authority's Guidance Document on "Safety Management Systems"?
- Evidence of Regulatory Compliance, including:
  - o are notifiable accidents reported to the Health and Safety Authority? Does the organisation collect information on non-reportable accidents?
  - o Regulatory compliance; Convictions, Enforcement Notices, in particular repeat Notices.

While past performance may be a guide to future performance, it may not be representative in cases where there have, for example, been major changes in the management structure or personnel of the company.

Competency of Project Supervisor Construction Stage: The Client or other person will need to make reasonable enquires to check that the person or company to be appointed is able to fulfil the responsibilities of the position. These reasonable enquiries might take the form of enquiries to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee or members of the proposed appointee's team. The client may need to seek professional advice from industry bodies. The extent of these enquiries will depend on the scale, complexity, and the hazards of the project and may include enquiring about the following:

- Membership of professional body;
- Knowledge of construction, particularly in relation to the nature of the project;
- Safety and Health qualifications, and training (e.g. degree, diploma, certificate, managing safety in construction, continual professional development);
- Safety and Health experience on similar projects:
  - o experience of working with and co-ordinating the activities of different contractors and acting as a liaison between the construction phase and the design function;
  - o Experience of developing the Safety and Health Plan.
- Sufficient staff with qualifications, training and experience, both within the company and from other sources, relevant to the project;
- Experience in developing and monitoring compliance with Safety and Health Plans;
- Evidence of a functioning safety management system, including:
  - o is there a company safety and health policy, and arrangements for the effective organisation of safety and health matters?
  - o is there an up to date Safety Statement?
  - o is there a site-specific risk assessment?

- o is there evidence of communicating to employees information on hazards and protective and preventative measures, for example the Authority's Safe System of Work Plan?
- o are individuals identified with responsibility for safety and health for each project?
- o is there evidence of checking, e.g. scaffolding, lifting equipment, excavation inspections audits?
- o is there evidence of corrective actions, learning from past experience?
- o is there evidence of a Safety Management System such as that detailed in the Health and Safety Authority's Guidance Document on "Safety Management Systems"?
- o is there evidence of a certified Safety Management System, e.g. Safe T Cert or equivalent.
- Evidence of Regulatory Compliance, including:
  - o are notifiable accidents reported to the Health and Safety Authority? During 2004, the accident rate for the Construction Sector was 2.5 reportable accidents per 100 workers per year. Up to date averages are available from the Authority, www.hsa.ie.
  - o does the organisation collect information on non-reportable accidents?
  - o Regulatory compliance, Convictions, Enforcement Notices, in particular repeat Notices.

It should be noted that where a small number of persons are employed by an organisation, a low or high accident rate for a particular year nay not be representative of a poor safety management system.

If an organisation has a particularly high accident rate, then further enquires should be made. Equally, if a company has a particularly low rate of reportable accidents, further enquires should also be made, as underreporting of accidents in the industry is an issue.

Many Project Supervisors Construction Stage do not have a large number of direct employees on a project and therefore enquires should be made in relation to reportable accidents on previous projects as a whole.

While past performance may be a guide to future performance, it may not be representative in cases where there have, for example, been major changes in the management structure or personnel of the company.

Competence of designers: The Client or other person will need to make reasonable enquires to check that the person or company to be appointed is able to fulfil the responsibilities of the position. These reasonable enquiries might take the form of enquiries to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee or members of the proposed appointee's team. The client may need to seek professional advice from industry bodies as to the competence of a designer. The extent of these enquiries will depend on the scale, complexity and the hazards of the project and may include enquiring the following:

- Membership of professional body;
- · Knowledge of design and construction, particularly in relation to the nature of the project;
- Safety and Health qualifications and training (e.g. degree, diploma, certificate, continual professional development);
- Safety and Health experience on similar projects:
  - o experience of working with other designers;
  - o experience of preparing information to be incorporated into a Safety and Health Plan;
  - o knowledge of preparing information for a Safety File.
- Sufficient staff with qualifications, training and experience, both within the company and from other sources, relevant to the project,
- Evidence of a functioning Safety Management System, including:
  - o is there an up to date Safety Statement?
  - o are individuals identified with responsibility for safety and health for each project?
  - o is there evidence of corrective actions, learning from past experience?
  - o is there evidence of a Safety Management System such as that detailed in the Health and Safety Authority's Guidance Document on "Safety Management Systems".
- Evidence of Regulatory Compliance, including:
  - o are notifiable accidents reported to the Health and Safety Authority? Does the organisation collect information on non-reportable accidents?
  - o Regulatory compliance; Convictions, Enforcement Notices, in particular repeat Notices.

While past performance may be a guide to future performance, it may not be representative in cases where there have, for example, been major changes in the management structure or personnel of the company.

Competence of Contractors: The Client or other person will need to make reasonable enquires to check that the person or company to be appointed is able to fulfil the responsibilities of the position. These reasonable enquiries might take the form of enquiries to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee or members of the proposed appointee's team. The client may need to seek professional advice from industry bodies as to the competence of a contractor. The extent of these enquiries will depend on the scale, complexity and the hazards of the project and may include enquiring about the following:

- Knowledge of construction, particularly in relation to the nature of the project;
- Safety and Health qualifications and training (e.g. degree, diploma, certificate, managing safety in construction, continual professional development);
- Experience on similar projects:
  - o experience of working with different contractors.
- Sufficient staff with qualifications, training and experience including Safety Awareness program, e.g.
  FÁS Safe Pass and relevant Construction skills cards, e.g. FÁS Constructions Skills Certification Scheme
  cards for the project;
- Evidence of a functioning Safety Management System, including:
  - o is there a company safety and health policy and arrangements for the effective organisation of safety and health matters?
  - o is there an up to date Safety Statement?
  - o is there a site-specific risk assessment?
  - o is there evidence of communicating to employees information on hazards and protective and preventative measures, for example the Authority's Safe System of Work Plan.
  - o are individuals identified with responsibility for safety and health for each project?
  - o is there a safety representative?
  - o is there evidence of checking, e.g. scaffolding, lifting equipment, excavation inspections and/or audits?
  - o is there evidence of corrective actions, learning from past experience?
  - o is there evidence of a certified Safety Management System, e.g. Safe T Cert or equivalent.
- Evidence of Regulatory Compliance, including:
  - o are notifiable accidents reported to the Health and Safety Authority? During 2004, the accident rate for the Construction Sector was 2.5 reportable accidents per 100 workers per year. Up to date averages are available from the Authority, www.hsa.ie.
  - o Does the organisation collect information on non-reportable accidents?
  - o Regulatory compliance, Convictions, Enforcement Notices, in particular repeat Notices.

If an organisation has a particularly high accident rate, then further enquires should be made. Equally, if a company has a particularly low rate of reportable accidents, further enquires should also be made, as underreporting of accidents in the industry is an issue.

While past performance may be a guide to future performance, it may not be representative in cases where there have, for example, been major changes in the management structure or personnel of the company.

## **EXAMPLE OF THE CONSEQUENCES OF NOT APPOINTING PROJECT SUPERVISORS:**

A Client did not appoint a Project Supervisor Design Process, nor a Project Supervisor Construction Stage The Client arranged for a section of roof sheeting to be replaced, as it was leaking. The Client did not inform the contractor that the adjacent section of roof contained fragile rooflights. A roofer stepped on to the adjacent roof and fell to his death.

#### "Regulation 6

- 6.(2) Nothing in paragraph (1) prevents
  - (a) a client being self-appointed as project supervisor if competent to undertake the duties involved, or
  - (b) a client appointing one individual or body corporate as project supervisor for both the design process and construction stages if that individual or body corporate is competent to undertake the duties involved."

Clients may appoint themselves as PSDP and PSCS, or the client may appoint a single other party to carry out both roles, if the appointees have the requisite competence to take on either or both roles.

#### 2.1.8 When Should Appointments be Made?

## "Regulation 6

- 6.(3) A client shall appoint the project supervisor
  - (a) for the design process at or before the start of the design process, and
  - (b) for the construction stage before commencement of the construction work."

Early appointments should be made to ensure that the safety and health implications of decisions taken at the earliest stages of a project are considered.

The PSDP can bring about the greatest reduction in risk at the concept and scheme design phases. As the scheme moves further into the detailed design phase, it becomes more difficult to make fundamental changes that eliminate hazards and reduce resulting risks. The PSDP must be appointed at or before the start of design work to enable him or her to:

- advise Clients on the competence and resources of their appointees;
- ensure that early design decisions fully address significant safety and health issues;
- · enable the development of an adequate preliminary Safety and Health Plan; and
- enable the Safety File to be produced in a user friendly format suitable for future use.

#### **EXAMPLE OF MAKING TIMELY APPOINTMENTS:**

A Client wished to appoint a design and build contractor for a project. To prepare for this, he appointed a competent Project Supervisor Design Process and a designer. The Project supervisor developed the Safety and Health Plan, which was issued to all those invited to tender for the position of Project Supervisor Construction Stage. The tender documents also stated that the successful candidate would also take over the role of Project Supervisor Design Process and to submit with their tender evidence of their competence to do this.

## **EXAMPLE OF NOT MAKING TIMELY APPOINTMENTS:**

On a large contract for a bank, the Project Supervisor Design Process was appointed late and given less than 48 hours to prepare a preliminary Safety and Health Plan. As a result, the plan contained in the tender documents for the Project Supervisor Construction Stage was deficient. Work was delayed when underground services were located on site. No information relating to underground services was contained in the Preliminary Safety and Health Plan.

Early appointment of the PSCS, where feasible, allows him or her to contribute to the design process and gives time to develop the Safety and Health Plan and co-ordinate the provision of welfare facilities.

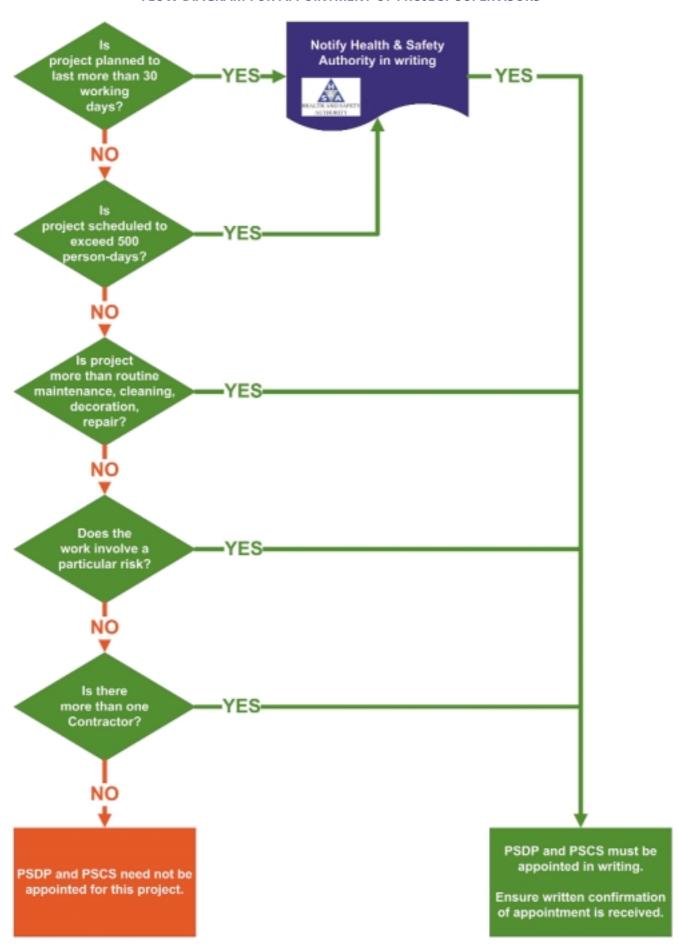
## "Regulation 6

6.(4) An appointment under paragraph (1) shall, as necessary, be made, terminated, changed or renewed."

During the design or construction of a project, the need to change the appointed PSDP or PSCS may arise. This may happen for contractual reasons or because appointees have manifestly failed to carry out their appointed role. Clients should allow themselves this facility in any contracts entered into between themselves and potential Project Supervisors.

Any changes that are made to these appointments should be formally made in writing and acknowledged by the new appointees in writing. The Client should keep copies of these appointments on file. In general, where a competent person (or organisation) has been appointed, the guidelines do not seek to give the client an ongoing monitoring responsibility of the design or construction. However, where it comes to the attention of the client that the Project Supervisor(s) appointed are not discharging their duty then the client has the authority to terminate or change the appointment as appropriate. Where the client wishes to take on a monitoring role, the Regulations (or the guidelines) will not preclude this.

## FLOW DIAGRAM FOR APPOINTMENT OF PROJECT SUPERVISORS



## 2.1.9 Are there Circumstances where Appointments do not have to be made?

#### "Regulation 6

- 6.(5) Paragraph (1) does not apply to routine maintenance, cleaning, decoration and repair within or to a structure unless
  - (a) the work involves a particular risk including but not limited to a risk referred to in Schedule 1,
  - (b) more than one contractor is involved, or
  - (c) Regulation 10 applies."

There is no obligation to appoint a PSDP and PSCS if the work involved is routine maintenance, cleaning, decoration or repair and:

- Does not include a "particular risk" (a "particular risk" within the Regulations has a specific meaning and is derived from a non-exhaustive list in Schedule 1 to the Regulations);
- Has only one contractor;
- Does not require Notification to the Health and Safety Authority.

## "Regulation 6

- 6.(6) In accordance with section 58(4)(d) of the Act and without prejudice to the duties of a contractor undertaking construction work under these Regulations, section 17(1) of the Act does not apply to or in respect of a project if
  - (a) a person commissions or procures the project in relation to the person's domestic dwelling, and
  - (b) the project is not for the purpose or furtherance of a trade, business or undertaking after the completion of construction work."

Section 17 of the Safety, Health and Welfare at Work Act 2005 specifies duties to be complied with by persons who commission or procure construction work. Such persons must appoint in writing a competent person or persons to ensure, so far as is reasonably practicable, that the project:

- is designed and is capable of being constructed to be safe and without risk to health;
- (b) is constructed to be safe and without risk to health;
- can be maintained safely and without risk to health during subsequent use; and
- complies in all respects, as appropriate, with the relevant statutory provisions.

Regulation 6(6) of the Construction Regulations 2006 provides for an exemption from section 17(1) in accordance with section 58(4) of the Act, for:

- owners of domestic dwellings or persons procuring construction of their own domestic dwelling; and
- construction work that is not for the purpose or furtherance of a trade, business, or undertaking after the completion of construction work.

This provision exempts owners of domestic dwellings procuring or commissioning construction work such as renovations, repairs or modification, or procuring the construction of their own domestic dwelling from the need to appoint in writing a competent person or persons.

However, if a person is commissioning the construction of a domestic house or construction work on a domestic house which is for the purpose of or furtherance of business, trade or other undertaking the exemption does not apply.

It should be noted that those appointed to design or construct a domestic house or construction work on a domestic house should have adequate safety and health arrangements in place for the project.

#### 2.2 Is there more than one Client?

#### "Regulation 6

- 6.(7) If all of the clients involved in a project agree in writing that one or more but not all of them shall be treated as the client for the purposes of these Regulations
  - (a) the client or clients agreed on shall be subject to all the duties of a client under these Regulations, and
  - (b) after that agreement is made, the others shall not be subject to the duties of a client under these Regulations, except the duties under Regulations 8(1) and (3)."

Where there are a number of Clients for example, if a partnership commissions or procures construction work, then one or more of the Clients can elect to be treated solely as the Client for the purposes of the Construction Regulations 2006. This must be agreed in writing and once so agreed the other Clients are exempt from further ongoing duties, except the duty of Clients to keep available the safety file and any information in relation to the safety File (Regulations 8(1) and (3)).

#### **EXAMPLE OF A NUMBER OF CLIENTS:**

A doctor's practice, consisting of three general practitioners who are all partners in the practice, wishes to extend the premises to include two additional practice rooms. Under the Regulations all the partners are Clients. However, one of the partners elects in writing to be considered the sole Client. Once the other two partners agree in writing then the elected partner is considered the Client for the purpose of the Regulations, except for Regulation 7(1) and (3) which relates to the keeping of the Safety File and co-operation with and providing information to the PSDP.

#### 2.2.1 Appointees' Resources

#### "Regulation 7

- 7.(1) A client shall not appoint a person as project supervisor for the design process for a project unless reasonably satisfied that the person has allocated or will allocate adequate resources to enable the person to perform the duties imposed under these Regulations for that project supervisor position.
  - (2) A client shall not arrange for a designer to prepare a design unless reasonably satisfied that the designer has allocated or will allocate adequate resources to enable the designer to comply with Regulation 15."

Clients have a duty to ensure that those appointed as PSDP, designers, PSCS, or contractors have adequate resources to carry out their functions under the Regulations. Resources as they relate to the PSDP (and designers) include staff with the requisite expertise and competence to assist in the execution of the role of PSDP (or designer) for a project or part of a project. Regulation 6(5) and (6) require that assurance is sought by the Client that the PSDP or Designer will deploy resources to the project at a suitable time and in an appropriate manner to allow the role of PSDP/Designer be executed in accordance with the Regulations. Resources may also include infrastructure within or available to a company, such as information technology, communication systems, in-house safety management systems, and other items of infrastructure which facilitate the execution of the role of PSDP/Designer in accordance with the Regulations.

The assessment of resources is an important aspect of the Regulations. To reasonably assure himself or herself of the resources that will be deployed to a project by the successful appointees, the client is expected to make reasonable enquiries in relation to potential appointees. These reasonable enquiries might take the form of enquiries to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee or members of the proposed appointee's team.

An assessment may include enquiries on the following:

 Details of the personal competence of the individual persons proposed to be involved (e.g. qualifications, training and practical experience);

- The organisation having a developed and functioning system for managing safety and health;
- Previously established relationship with the candidates where they have performed the role;
- The ability of the candidate organisation to supply key personnel, essential equipment and appropriate managerial systems to the project (and to be able to do this over the required time-scale).

## "Regulation 7

- 7.(3) A client shall not appoint a person as project supervisor for the construction stage for a project unless reasonably satisfied that the person has allocated or will allocate adequate resources to enable the person to perform the duties imposed under these Regulations for that project supervisor position.
- 7.(4) A client shall not arrange for a contractor to carry out or manage construction work unless reasonably satisfied that the contractor has the competence to carry out or, as the case may be, manage that construction work and has allocated or will allocate adequate resources to enable the contractor to comply with the requirements and prohibitions imposed on the contractor by or under the relevant statutory provisions."

In a similar manner to appointments of a PSDP and a Designer (required under Regulation 7(1) and (2), a Client appointing a PSCS or Contractor must make reasonable enquiries regarding potential PSCS's/Contractor's resources and the deployment of those resources. Resources for a PSCS or Contractor will also include staff of suitable competence deployed as necessary to execute the project in accordance with the Regulations. In addition to the other resources such as IT and Management Systems as required for a PSDP/Designer, additional resources, which might be necessary for a PSCS/Contractor, include plant and machinery, material of the requisite type and quantity, potential availability of competent sub-contractors, and adequate welfare facilities.

In making reasonable enquiries regarding a potential PSCS or Contractor, the person making the appointment should use equivalent sources as suggested for the PSDP/Designer. These enquiries could be made to the potential appointees themselves and/or of others who are familiar with the competence and capabilities of the proposed appointee. In addition, enquiries could also be made of the PSDP, if he or she is in place, or other members of the Design team. Once the PSCS is in place, his or her opinion may also be sought regarding other appointments being contemplated.

An assessment may include enquiries on the following:

- Details of the availability of the individual competent persons proposed to be involved (e.g. qualifications, training and practical experience);
- The organisation having a developed and functioning system for managing safety and health;
- Previously established relationship with the candidates where they have performed the role;
- The ability of the candidate organisation to supply key personnel, essential equipment and appropriate managerial systems to the project (and to be able to do this over the required time-scale).

## 2.2.2 Persons other than a Client making Appointments

## "Regulation 7

- 7.(5) A person to whom these Regulations apply shall not arrange for a designer to prepare a design unless reasonably satisfied that the designer has the competence to prepare the design and has allocated or will allocate adequate resources to enable the designer to comply with Regulation 15.
- 7.(6) A person to whom these Regulations apply shall not arrange for a contractor to carry out or manage construction work unless reasonably satisfied that the contractor has the competence to carry out or, as the case may be, manage that construction work and has allocated or will allocate adequate resources to enable the contractor to comply with the requirements and prohibitions imposed on the contractor by or under the relevant statutory provisions."

Just as in the case of the Client making appointments, any other person, e.g. a PSCS appointing a designer or a contractor must be reasonably satisfied that the appointees are competent and have adequate resources

available to them to comply with the Regulations. A PSCS or PSDP appointing a designer or contractor should carry out an assessment as outlined above.

## 2.2.3 Duties of Clients (Safety File)

#### "Regulation 8

- 8.(1) A client shall keep available -
  - (a) any safety file referred to in Regulation 13 or 21, and
  - (b) any information delivered to a client in relation to the file

for inspection by any person who may need information in the file for -

- (i) the purpose of compliance by that person with any duties imposed under the relevant statutory provisions, or
- (ii) for that person's own information when carrying out any construction work on the structure to which the safety file relates."

The Safety File is a key document produced during the construction of a project but is primarily intended for the safety of end users of the structure or those who will extend or maintain the structure in future. The PSDP must pass the Safety File to the Client at completion, and thereafter the client must make the Safety File available, if necessary, e.g. to subsequent designers or contractors engaged in relation to the maintenance or renovation of the structure, or pass it on to any new owner of the built structure.

## "Regulation 8

- 8.(2) It is sufficient compliance with paragraph (1) by a client and every subsequent owner of a structure who disposes of the client's or owner's interest in the structure involved if the client or subsequent owner delivers the safety file for that structure to the person who acquires the interest.
- 8.(3) A person to whom a safety file is delivered in accordance with paragraph (2) shall keep the safety file available for inspection in accordance with paragraph (1)."

Where the client or subsequent owner of a structure sells or otherwise disposes of his or her interest in a structure that has been constructed, then the client must pass on the Safety File to the new owner. Where a client disposes of his or her interest in part of a structure or development then he or she should ensure that they pass on the relevant section of the Safety File for the relevant part. This might happen in the case of the selling of an office floor of a building, or the selling of a house or a number of houses in a new estate. The person receiving the Safety File must keep it available for inspection.

#### 2.2.4 Client's Co-operation and Information

## "Regulation 8

8.(4) A client shall co-operate with the project supervisor for the design process and the project supervisor for the construction stage, as appropriate, including in relation to the time required for the completion of the project and by providing information to enable the relevant project supervisor to comply with these Regulations."

The Client should co-operate in making information available to the appointees. The Client may be in a position to effectively control matters, e.g. traffic (vehicular and pedestrian) in the environs of the construction project. Where the Client can control such matters, the client should exercise this control in such a manner as to minimise the risk to those working on the construction site and to those not involved in the construction process.

Where a client appoints a Contract Administrator in the form of a Resident Engineer or Project Manager to oversee the project on behalf of the client, that appointee must co-operate with the Project Supervisors in order that they may comply with the Construction Regulations. Such an Administrator represents the client

and therefore has a duty to co-operate. For example, where the Contract Administrator or Client has authority for road closures and the PSCS raises a concern regarding the safety of such closures, the Administrator or client should co-operate with the PSCS in order that the requirements of the Construction Regulations can be met. If the Client or Appointed Administrator has independently appointed subcontractors to carry out works under the direction of the Client, then co-operation is required of both Client (or Contract Administrator) and that contractor to allow the Project Supervisors to fulfil their role.

## "Regulation 8

- 8.(5) The information required to be provided under paragraph (4) is information relating to the state or condition of any structure, including information in a safety file that is
  - (a) prepared in accordance with the relevant statutory provisions,
  - (b) relevant to the duties of the project supervisors under these Regulations, and
  - (c) either in the client's possession or could be obtained by the client making enquiries which it is reasonable for a person in the client's position to make."

The Client must co-operate with the Project Supervisors to enable them to carry out their duties. This means providing them with information that a client may reasonably have within his or her possession or that may be obtained with reasonable enquiry which the Project Supervisors need to perform their roles. The information that they will require would include the Safety File, and any hazard that might impact upon the safety and health of any parties working on the site or affected by the construction process and that would be needed to help to reduce or manage that risk. In general, this sort of information will already have been given to the PSDP who will have included it in the Preliminary Safety and Health Plan.

#### EXAMPLE OF A CLIENT CO-OPERATING WITH A PROJECT SUPERVISOR DESIGN PROCESS:

A Client proposed to build a new ferry terminal. The Client was aware of the operation of a liquefied petroleum gas terminal near to the proposed new ferry terminal. The Client passed on this information to the Project Supervisor Design Process. As a result the PSDP was able to take account of the risks relating to the location of the LPG when preparing the Preliminary Safety and Health Plan.

## **EXAMPLE OF A CLIENT CO-OPERATING WITH A PROJECT SUPERVISOR THE DESIGN PROCESS:**

A Client commissioned an asbestos survey before beginning the refurbishment of a 1960s office block. This revealed the presence of amosite asbestos. The results of the survey were passed to the Project Supervisor Design Process and included in the tender documents for the PSCS.

#### 2.2.5 Duties of Clients (Safety and Health Plan)

## "Regulation 9

- 9. A client shall provide or arrange to have provided a copy of the safety and health plan prepared under Regulation 12 to every person
  - (a) being considered for the role of project supervisor for the construction stage, or
  - (b) tendering for that role."

The Safety and Health Plan prepared by the Project Supervisor Design Process is discussed in depth in the chapter on the Project Supervisor Design Process. Its purpose is to "flag-up", at a relatively early stage, any residual safety and health issues specific to that project. This provision should ensure that those tendering for the role of Project Supervisor Construction Stage would have access to relevant information, so as to enable them to take safety and health into account in making their tender submissions. This, in turn, will assist the client (or the client's representative) in assessing the competence and resources of those making the submissions. Where the nomination of the PSCS will involve a negotiation rather than a tendering procedure, the Preliminary Safety and Health Plan should be available to the prospective PSCS during the negotiations.

#### 2.2.6 Duties of Clients (Notification to the Authority)

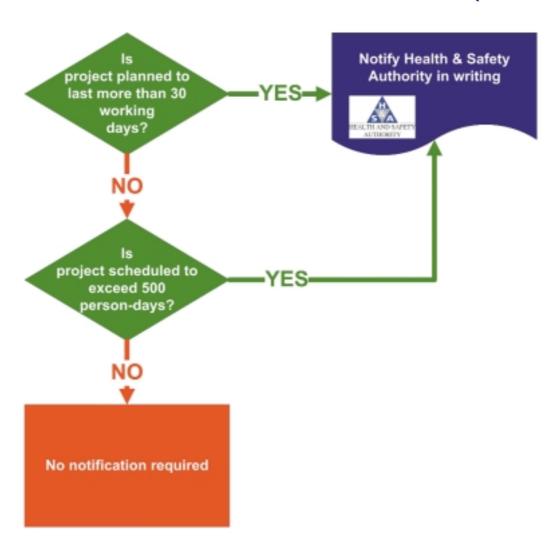
## "Regulation 10

- 10. If construction work is planned to last longer than 30 working days or the volume of work is scheduled to exceed 500 person days, a client shall promptly give notice in writing to the Authority in an approved form, sent either
  - (a) by registered post, or
  - (b) as may be directed from time to time by the Authority,

of those particulars as are known or can be reasonably known about the appointments made in accordance with Regulation 6."

If construction work on a project is planned to last longer than 30 working days or exceed 500 person-days, the Client must promptly notify the Health and Safety Authority of the project, the details of the Project Supervisor Design Process, and the Project Supervisor Construction Stage where this is known, as set out in Approved Form AF.1 in Appendix 1 to these Guidelines. This Notification should be made at the earliest possible point after the making of the appointment of the PSDP. The notice should be sent by registered post to the Authority or as may be directed by the Authority. The Project Supervisor Construction Stage is also required to notify the Authority of a construction project.

## WHEN IS NOTIFICATION TO THE HEALTH AND SAFETY AUTHORITY REQUIRED?



## 2.2.7 Does any other Legislation Apply?

In accordance with the Safety, Health and Welfare at Work Act 2005, anyone who exerts control to any extent over a place of work must exert that control in such a fashion as to ensure, so far as is reasonably practicable, the safety, health and welfare of workers at the place of work and those affected by the work being carried out at the place of work. Obviously a client (or others appointing contractors and designers) may exert control (to a greater or lesser extent) over workplaces and so their duty is governed by the extent that they have control.

Section 17 of the 2005 Act also requires a person who commissions or procures a project for construction work to appoint in writing a competent person or persons for the purpose of ensuring, so far as is reasonably practicable, that the project:

- (a) is designed and is capable of being constructed to be safe and without risk to health;
- (b) is constructed to be safe and without risk to health;
- (c) can be maintained safely and without risk to health during subsequent use; and
- (d) complies in all respects, as appropriate, with the relevant statutory provisions.

The appointments under section 17 of the Act will generally mirror the requirement to appoint a competent PSCS and a competent PSDP.

If Clients specify materials or methods of working, this may make them designers under the Regulations with the additional duties of a designer in relation to those specific matters. Clients must ensure that they understand and fulfil such duties where their requirements have significant safety and health implications.

## **EXAMPLE OF A CLIENT ACTING AS A DESIGNER:**

A designer specified tilt-and-turn windows to reduce risks during window cleaning. The client overruled this on the grounds of cost. The designer pointed out that the client was taking over his duties under Regulation 5 and needed to address how the risk to window cleaners could be minimised and how the duties under the Regulations would be complied with.

## Part 3. Project Supervisor Design Process

## 3.1 Summary of Duties of the Project Supervisor Design Process (PSDP)

## The Project Supervisor Design Process must:

- Identify hazards arising from the design or from the technical, organisational, planning, or timerelated aspects of the project;
- Where possible, eliminate the hazards or reduce the risk;
- Communicate necessary control measures, design assumptions, or remaining risks to the PSCS so they can be dealt with in the Safety and Health Plan;
- Ensure that the work of designers is co-ordinated to ensure safety;
- · Organise co-operation between designers;
- Prepare a written safety and health plan for any project where construction will take more than 500 person days or 30 working days or there is a Particular Risk and deliver it to the client prior to tender:.
- Prepare a safety file for the completed structure and give it to the client;
- · Notify the Authority and client of non-compliance with any written directions issued;
- The PSDP may issue directions to designers or contractors or others.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

## 3.1.1 Who should be appointed as Project Supervisor Design Process?

The person (or company) appointed to the position should be competent having regard to the task, the size of the project and the hazards, and have (or have within its ranks persons who have) –

- · extensive knowledge of the design process;
- familiarity with the type of construction work involved with the project;
- a sound understanding of the safety and health issues associated with that work;
- good communication skills and systems; and
- sufficient training appropriate to the type of work, e.g. a recognised certificate, higher certificate, or degree in Safety and Health awarded as part of the national framework of qualifications.

Though the Project Supervisor Design Process must have an extensive knowledge of the design process, that person does not necessarily carry out design work, nor even be a designer. The important point is that the person appointed is competent in safety and health, and is adequately resourced for the role. The Project Supervisor Design Process will generally be an organisation rather than an individual person for all but the smallest contracts. The organisation would typically be an architectural practice, a contractor, a firm of consulting engineers, or a specialist project management group.

## 3.1.2 Duties of the Project Supervisor Design Process, (Co-ordination and Co-operation)

"Regulation 11

#### 11.(1) The project supervisor for the design process shall –

- (a) take account of the general principles of prevention during the various stages of the design and preparation of a project, in particular
  - (i) when either, or both, technical or organisational aspects are being decided, in order to plan the various items or stages of work which are to take place simultaneously or in succession, and
  - (ii) when estimating the time required for completion of a project and, where appropriate, for stages of a project,
- (b) take account of any safety and health plan or safety file, and
- (c) organise co-operation between designers on the same project and, so far as is reasonably practicable, ensure co-ordination of their activities in relation to the design of the project with a view to protecting the safety, health and welfare of persons involved in construction work."

#### 3.1.3 General Principles of Prevention

During the design process the Project Supervisor Design Process (PSDP) is required to take account of the General Principles of Prevention, outlined below, when deciding the technical and organisational aspects of the project. This will help in the planning and phasing of the project and when estimating the timeframe for the safe completion of the project and, where appropriate, for phases of the project.

In addition the PSDP must take account of any existing Safety and Health Plan or Safety File. The Safety File may contain information which will alert the PSDP and Designers of significant safety and health risks that will need to be addressed in the safety and Health Plan. (See Appendix 3 Lifecycle of the Safety and Health Plan and Safety File).

When the PSDP is estimating time schedules for the project or phases of the project, consideration must be given to how the timing of the progression of the construction work is calculated so as to ensure worker safety and health is taken into account. The PSDP should consult with the Client and Designers when establishing the timeframe. Both are obliged to co-operate with the PSDP and not to seek that work be completed within unreasonable time frames.

While the Project Supervisor Construction Stage also has a responsibility under Regulation 17(1) concerning the estimation of time, both of the Project Supervisors have independent roles in this regard.

The General Principles of Prevention contained in Schedule 1 to the Safety, Health and Welfare at Work Act 2005 set out a key hierarchy with regard to the prevention of accidents and ill-health. In the context of the Construction Regulations 2006, the Principles of Prevention apply to construction work and its associated preparation.

## The General Principles of Prevention are set out in descending order of preference as follows:

- 1. The avoidance of risks, e.g. where appropriate by selecting non-fragile roofing materials, or by avoiding the disturbance of contaminated land where practicable.
- 2. The evaluation of unavoidable risks, i.e. evaluating the likely consequences of such risks.
- 3. The combating of risks at source. If risks cannot be avoided, they should be combated at source so far as practicable, e.g. by specifying brush application of a treatment rather than spraying to reduce solvent exposure, or specifying finishing materials containing less harmful constituents.
- 4. The adaptation of work to the individual, especially as regards the design of places of work, the choice of work equipment and the choice of systems of work, with a view, in particular, to alleviating monotonous work and work at a predetermined work rate, and to reducing their effect on health. This will make work less monotonous and improve concentration, and reduce the temptation to take short cuts or to improvise equipment and materials.
- 5. The adaptation of the place of work to technical progress; taking advantage of technical progress often offers opportunities for safe and more efficient working methods.
- 6. The replacement of dangerous articles, substances, or systems of work by non-dangerous or less dangerous articles, substances, or systems of work, e.g. replacing solvent-based paints with water-based ones where practicable.
- 7. The giving of priority to collective protective measures over individual protective measures. Measures which protect everyone should be given priority over those which protect only an individual, e.g. the provision of fixed guard rails on a maintenance walkway rather than safety harnesses, the installation of safety nets rather than relying on individual safety harnesses, the provision of local exhaust ventilation in preference to personal protective equipment.
- 8. The development of an adequate prevention policy in relation to safety, health and welfare at work, which takes account of technology, organisation of work, working conditions, social factors and the influence of factors related to the working environment. The Safety and Health Plan for the site should act as the focus for the bringing together and co-ordination of the preventive policies of the various contractors involved in the project. Where a Safety and Health Plan is not required under the Construction Regulations 2006, the Safety Statement as required by the 2005 Act must contain an adequate prevention policy.
- 9. The giving of appropriate training and instruction to employees.

In co-ordinating the application of the above principles, the PSDP must consider how risks during the construction process can be proactively eliminated or mitigated by designers during the design process. If it is apparent that certain risks cannot reasonably be eliminated, then the second principle above suggests that risks must be evaluated. One method of evaluating the risks as required is by the carrying out of written risk assessments of the integral elements of the design process. This is commonly referred to as a design risk assessment. The PSDP has a key role in co-ordinating the carrying out of these risk assessment and to assess if any gaps have been left in the assessment process.

#### **EXAMPLE OF CO-ORDINATION OF DESIGN RISK ASSESSMENTS:**

A PSDP noted that a particular project had extensive works in service shafts. He noted that the design risk assessments of the building services engineer did not take adequate account of personnel falling during the installation of services such as pipes and cables in the shafts. To control the risk, the PSDP arranged co-ordination between the structural designer and the building services engineer resulting in the design and installation of a simple platform spanning the shaft leaving adequate room for services but preventing the risk of personnel falling.

#### **EXAMPLE OF PSDP CO-ORDINATION AND CO-OPERATION:**

At an early stage in the design process a designer identified a 110 kV electricity line traversing part of a site near where a three-storey apartment scheme was to be built. The foundations required piling and the roof trusses would be craned in. The area adjacent to the line was an area likely to be used for site office and welfare facilities and to site the crane during lifts. The designer informed the PSDP that there was a risk of contact with the lines during placement of the site buildings and during piling and craning operations. The electricity supply company informed the PSDP that only minimum switch-outs of the line could be assured during the construction phase. The PSDP decided that the best option was to have the lines moved. The period of the contract meant that the PSCS, when appointed, might not be able get the electricity supply company to move the lines before piling operations started on site. The PSDP requested the company to divert the lines, giving adequate notice to ensure that the lines could be moved before site works commenced. The network provider, having been given adequate notice, ensured that the lines were moved in time. The Client appointed a PSCS before the line removal commenced, and the PSCS co-ordinated the removal with the electricity supply company and the ground-works sub-contractor.

The PSDP should also consider how the activities of each designer impinge on other designers and how risk assessments need modification as a result of this. Appendix 2 to these Guidelines shows recommended forms which could be used to record co-ordination of design risk assessments by the PSDP. The forms may not be suitable for all industries. For example, the chemical, petroleum and power industries use Hazard and Operability Studies (HAZOP), Failure Mode and Effect Analysis (FMEA), ATEX assessments and SEVESO studies. Such design risk assessments would be detailed reports in themselves, and are equally valid as design risk assessments for other aspects of construction.

The PSDP must co-ordinate, so far as is reasonably practicable, activities of the designers in respect of their duties under the Construction Regulations 2006 and, together with the PSCS, facilitate co-operation between the permanent works designers and the temporary works designers, as may be necessary.

The PSDP should take steps to ensure co-operation between permanent and temporary works designers, in particular that the designs are compatible and that loading from the temporary works will not exceed the loads that can be safely carried by the permanent works at a particular stage of their construction.

The PSDP should pay particular attention to potentially catastrophic issues such as overall instability of the structure during the various stages of construction and after completion. In co-ordinating the activities of the various designers where the integrity of a structure during construction is an important safety issue, the PSDP should insist (and be in a position to insist) that one designer takes overall responsibility for the stability of a structure during the envisaged construction process and that a suitably qualified engineer be employed to liaise with the designer, PSDP, and the PSCS.

The PSDP may have the competency to discharge this role personally. However, if the PSDP does not have appropriate competence, the PSDP needs to be aware of who is in a position to appreciate and take responsibility for the overall structural integrity of the structure, step by step during the envisaged construction sequence.

The requirement of the Construction Regulations 2006 for the PSDP to co-ordinate the design of the works, including the design of temporary works, does not eliminate the need for the appointment (generally by contractors) of competent temporary works engineers who understand the complexity of the forces involved in temporary works/permanent works interaction, and who can design the temporary works to safely take account of these forces.

In an age of increasing technology, the contractor who is responsible for providing the specified materials and the required standard of workmanship should recognise the need to employ qualified and experienced designers and supervisors on site where required.

The permanent works designer should also strive to minimise possible instances of instability during construction, by addressing the issue during the design of the structure.

The PSDP has a central role in the management of safety and health during the entire design process. This process starts when the design work commences and continues throughout the construction stage. The PSDP should take reasonable steps to bring about co-operation between the different designers engaged on the same project with a view to protecting persons at work, irrespective of whether the Client, permanent works designer, Contractor, or some other person has appointed the Designer, as detailed in Regulation 11(1)(c).

The PSDP needs to make sure that there are appropriate systems in place to encourage communication and the sharing of relevant information. The PSDP may need to convene special meetings if he or she is not satisfied that there is sufficient co-operation between designers, or with other team members, or if adequate regard is not being given to safety and health.

During the design process, the PSDP is required to co-ordinate the activities of the various designers. It might be useful to split the designers into three groups as follows:

- Permanent works designers (e.g. Project Structural Engineer, Project Mechanical Engineer, Project Electrical Engineer, Architect);
- Specialist Designers (e.g. Lighting Consultant, Steel Designer, Precast designer, IT Designer);
- Temporary Works Designers (e.g. Temporary Support Designer, Shoring Designer, Temporary Electrics designer etc).

All designers will not fit comfortably into the classifications set out above, or may perform dual roles. However, as broad classifications this is a reasonable representation as to how designers may be classified for many projects. In organising co-operation between the various designers, the PSDP should consider all designers that might be appropriate to a particular element of the project.

The PSDP needs to pay particular attention to late designs or changes to designs, for example revisions on architects' instructions when clients require changes or when unforeseen problems are encountered on site, e.g. unforeseen ground conditions, so that they do not result in significantly increased risks. Arrangements should be made so that both Project Supervisors and Designers can consider these changes and their safety implications. Such arrangements may be specified in the Safety and Health Plan. Hurriedly produced solutions to problems, or other last-minute changes, can have tragic consequences if the implications are not identified and thought through.

The PSDP must ensure, so far as is reasonably practical, that the work of the designers is co-ordinated. The PSDP must take account of the interaction of different activities and tasks, with potential conflicts or gaps that could affect safety and health being anticipated and resolved.

The PSDP should also deal with feedback on any unanticipated hazards which are identified on site during construction and which might affect original design considerations.

Some temporary structures, e.g. scaffolds, are assembled in conformity with a generally recognised standard configuration, e.g. in accordance with manufacturer's specifications or drawings, or standard layouts prepared by organisations such as the National Association of Scaffolding Contractors. In many such cases, no co-ordination of the activities of designers is required, as the forces transferred onto the permanent structure during construction may be small. In other cases involving such structures, there will be a need to co-ordinate the activities of designers to ensure that the loads imposed by these temporary structures on the permanent

structure can safely be carried. Co-ordination may also be required where the design of the permanent structure does not permit the temporary structure to be erected in accordance with the standard configuration, e.g. the installation of ties at standard spacings may not be possible.

## **EXAMPLE OF DESIGN CO-ORDINATION TO REDUCE RISK OF FALL FROM HEIGHT:**

A four-storey office block was to be constructed with a glass atrium as an architectural feature. This would require the installation of lighting at a high level during construction and this would require cleaning internally on an ongoing basis thereafter. One risk identified at design stage was falling from a height while installing light fittings and cleaning the atrium The design was amended to reduce risk by designing the entrance doors to the building sufficiently large to allow access for a suitable Mobile Elevating Work Platform (MEWP) from which the light fittings could be installed and maintained and the atrium could be cleaned. The ground floor slab was designed by the structural engineer to cater for the intended MEWP. The design provision co-ordinated by the PSDP involved inputs from the architect, MEWP supplier, and Structural Engineer.

## **EXAMPLE OF REDUCED RISK THROUGH DESIGNED TRAFFIC MANAGEMENT:**

A major road development involving the realignment of existing roads would involve the interaction of existing road users and heavy machinery on roadways. The design was amended to include temporary roads drawings to illustrate arrangements which minimised the interaction between construction traffic and other road users. The PSDP co-ordinated inputs from the Civil Engineer, the local County Council and the Gardai to allow preparation of the drawings.

## "Regulation 11

11.(2) The project supervisor for the design process may appoint a competent person as health and safety co-ordinator for the design process to assist in the undertaking of the duties specified in paragraph (1)."

The PSDP may appoint a competent person as Health and Safety Co-ordinator Design Process to assist the PSDP in undertaking his or her duties in Regulation 11(1). The Health and Safety Co-ordinator Design Process does not replace the PSDP but is intended to provide a direct point of contact for the Designer and PSCS and to assist the PSDP in the co-ordination of activities of Designers during the design process. A Co-ordinator as envisaged by Regulation 11(2) may be necessary if the selected PSDP wishes to increase the level of competence available to him or her to cope with the duties under the Regulations. The appointment of such a co-ordinator does not relieve the PSDP of his or her duties.

3.1.4 Duties of Project Supervisor Design Process, (Safety and Health Plan)

#### "Regulation 12

- 12.(1) The project supervisor for the design process shall
  - (a) subject to paragraph (2), on a preliminary basis and for the purpose of providing information for the project supervisor for the construction stage, prepare a written safety and health plan that specifies
    - (i) a general description of the project and of the time within which it is intended that the project will be completed,
    - (ii) appropriate information on any other work activities taking place on the site,
    - (iii) where appropriate, work related to the project which will involve particular risks to the safety, health and welfare of persons at work including but not limited to those referred to in Schedule 1,
    - (iv) the basis upon which the time in subparagraph (i) was established, taking into account Regulation 11(1)(a),
    - (v) the conclusions drawn by designers and the project supervisor for the design process as regards the taking account of the general principles of prevention and any relevant safety and health plan or safety file, and
    - (vi) the location of electricity, water and sewage connections, where appropriate, to facilitate adequate welfare facilities,"

The main purpose of initiating the Safety and Health Plan at the design process is to provide the following information:

- A general description of the project;
- Any other work activities taking place on site;
- Work involving particular risks referred to in Schedule 1 to the Regulations but not limited to this list;
- The timescale for the project and the basis on which the time frame was established;
- Conclusions drawn by designers and the PSDP having taken into account the General Principles of Prevention and any relevant Safety and Health Plan or Safety File;
- The location of electricity water and sewage connections so as to facilitate early establishment of welfare facilities.

Regulation 12(1)(iv) and (v) requires the basis on which the period of time required for the project was established taking into account the conclusions drawn from bringing about the co-operation between designers and the conclusions drawn regarding taking account of the principles of prevention and any Safety and Health Plan or Safety File to be documented in the preliminary safety plan. The Safety File may contain information which will alert the PSDP and Designers of significant safety and health risks that will need to be addressed in the Safety and Health Plan. (See Appendix 3 Lifecycle of the Safety and Health Plan and Safety File).

#### 3.1.5 Particular Risks

"Particular Risks" are not explicitly defined in the Construction Regulations 2006. A non- exhaustive list of particular risks is given in Schedule 1 to the Regulations. The Safety and Health Plan must provide information on Particular Risks.

## Non-exhaustive List of Work Involving Particular Risks to the Safety, Health and Welfare of Persons at Work

- 1. Work which puts persons at work at risk of:
  - (a) falling from a height;
  - (b) burial under earthfalls; or
  - (c) engulfment in swampland.

where the risk is particularly aggravated by the nature of the work or processes used or by the environment at the place of work or construction site.

While work at height is not in itself a particular risk, if it is aggravated by other circumstances then it must be regarded as a particular risk.

- 2. Work which puts persons at work at risk from chemical or biological substances constituting a particular danger to the safety and health of such persons or involving a statutory requirement for health monitoring.
- 3. Work with ionising radiation requiring the designation of controlled or supervised areas as defined in Article 20 of Directive 80/836/Euratom.
- 4. Work near high-voltage power lines.
- 5. Work exposing persons at work to the risk of drowning.
- 6. Work on wells, underground earthworks, and tunnels.
- 7. Work carried out by divers at work having a system of air supply.
- 8. Work carried out in a caisson with a compressed-air atmosphere.
- 9. Work involving the use of explosives.
- 10. Work involving the assembly or dismantling of heavy prefabricated components.

**Risk of Falling From a Height:** Where the risk associated with working at a height is likely to be aggravated by the presence of another significant hazard then a particular risk may be present, for example:

- · Work on or adjacent to fragile roofing materials,
- Operations where the nature of the work or other restrictions make it impracticable to provide standard scaffolding or other suitable and sufficient means of support.

**Risk of Burial or Engulfment:** Where the risk associated with working in an excavation is aggravated by the presence of another significant hazardous underground services or where there is a risk of undermining existing foundations.

**Risks from Chemical or Biological Substances:** Where certain materials or substances are to be used, or materials in existing buildings are to be modified, a particular risk in relation to chemical or biological substances may exist. The circumstances of the use of certain materials or substances may give rise to particular risks based on their toxicological or physio-chemical properties, for example:

- the presence or potential presence of explosive atmospheres (including potential for dust explosions);
- work in confined spaces (i.e. areas where there is a possibility of a deficiency of oxygen or the presence
  of dangerous gases or vapours).

There may be a specific legal requirement for health monitoring where a work activity puts a person's health at risk from hazardous substances or preparations. Where such a requirement exists, the activity must be regarded as involving a particular risk.

Examples of activities requiring health monitoring and as such involving particular risks include:

- the stripping of lagging which contains or is likely to contain asbestos or the breaking and removal of
  insulating boards and tiles likely to contain asbestos to which the Safety, Health and Welfare at Work
  (Protection of Employees) (Exposure to Asbestos) Regulations 2006 (S.I. No. 386 of 2006) apply.
  Insulation products used prior to the mid 1970s often contained asbestos;
- the breaking or mechanical drilling and sawing of asbestos cement products where the above mentioned "action level" is likely to be reached or exceeded. This is more likely to occur when removing old or existing asbestos cement products rather than when installing such products when new;
- demolition involving the flame-cutting of painted steel where the paint is likely to contain lead and where an assessment reveals any conditions referred to in the Safety, Health and Welfare at Work (Chemical Agents) Regulations. Lead paint has not been used in significant quantities since the mid 1970s;
- work involving the use of substances which must be labelled with the risk phrases R45 "may cause cancer", or R49 "may cause cancer by inhalation", and where a risk assessment in accordance with Regulation 4(b) of the Safety, Health and Welfare at Work (Carcinogens) Regulations 2001 (S.I. No. 78 of 2001) reveals a risk to safety or health. Substances classified as carcinogens include zinc chromate and certain classes of bituminous substances which are used in caulking or sealants;
- work involving the use of substances or preparations which must be labelled with the risk phrase R42
  "may cause sensitisation by inhalation" and where a risk assessment in accordance with Regulations 4
  and 5 of the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of
  2001) reveals a risk to health. Substances classified as respiratory sensitisers include isocyanates. These are
  a component of many coatings, sealants and foams, particularly of "two pack" coatings or urethanes;
- any other work activity involving the use of any chemical or biological agent where a risk assessment in accordance with Regulations 4 and 5 of the above-mentioned Chemical Agents Regulations 2001 or Regulation 4 of the Safety, Health and Welfare at Work (Biological Agents) Regulations 1994 (S.I. No. 146 of 1994) as amended by the Safety, Health and Welfare at Work (Biological Agents) (Amendment) Regulations 1998 (S.I. No. 248 of 1998) reveals a risk to safety or health.

All hazardous substances and preparations must be labelled with appropriate hazard symbols and the suppliers must provide a safety data sheet when requested by any person. The labels and safety data sheets must include risk phrases which indicate the specific risks associated with the substance. These requirements are set out in the European Communities (Classification, Packaging, Labelling and Notification of Dangerous Substances) (Regulations 2003 (S.I. No. 116 of 2003) as amended by the European Communities (Classification, Packaging, Labelling and Notification of Dangerous Substances) (Amendment) Regulations 2006 (S.I. No. 25 of

2006) and the European Communities (Classification, Packaging and Labelling of Dangerous Preparations) Regulations 2004 (S.I. No. 62 of 2004).

**Work with Ionising Radiation:** Ionising radiation is most commonly encountered in connection with certain types of non-destructive testing and work near operating X-Ray machines or in hospital radiotherapy or nuclear medicine departments, or from some old lightning conductors.

Work Near High-Voltage Power Lines: This category includes all high-voltage power lines, including overhead and buried lines. It also includes high-voltage cables supplying fixed plant where a significant risk of breaching cable insulation exists. The Safety, Health and Welfare at Work (General Application) Regulations, define high voltage as any voltage exceeding 1,000 volts alternating current, or 1500 volts direct current.

**Risk of Drowning:** This category includes work over or near water where there is a risk of persons falling into the water and drowning. It also includes the risk of falling into and drowning in product vats, slurry tanks, or grain silos.

Assembly or Dismantling of Heavy Prefabricated Components: This category includes work involving steel sections, pre-cast concrete framing elements, pre-cast concrete floor units, pre-cast concrete cladding units, trussed rafters and some items of mechanical plant.

The detail that is required in documenting this will depend on the complexity of the project. However, the PSDP is essentially required to document how he or she has complied with these key duties and the conclusions drawn from that compliance in order to give clarity to the PSCS and others during the construction of the project. Appendix 3 to this Guidance contains suggested contents for the Preliminary Safety and Health Plan and the Lifecycle of the Safety and Health Plan and the Safety File.

3.1.6 When should the Safety and Health Plan be Prepared?

"Regulation 12.(1)

- (b) prepare the safety and health plan referred to in subparagraph (a) in time to enable it to be provided in compliance with Regulation 9 to every person being considered or tendering for the role of project supervisor for the construction stage, and
- (c) keep a copy of the safety and health plan referred to in subparagraph (a) available for inspection by an inspector for a period of 5 years after its preparation."

The Safety and Health Plan should be prepared in adequate time to allow it to be provided for anyone tendering or negotiating for the position of PSCS. This will allow the potential PSCS consider the implications of any issues emanating from the Safety and Health Plan when preparing the tender or proposal for execution of the works.

A copy of the Safety and Health Plan must be available to allow an Inspector assess the type of arrangements envisaged prior to the Construction Stage of any project. It may provide a valuable store of knowledge for use in follow-up or similar projects, or may provide a useful store of knowledge to be adopted, and adapted as appropriate. A copy of the plan must be kept for a period of five years.

"Regulation 12

12.(2) Where notification is not required under Regulation 10, a safety and health plan is required only for sites where the work concerned involves a particular risk, including but not limited to any of those referred to in Schedule 1."

Under certain conditions, notification of construction projects to the Health and Safety Authority will not be required, i.e. where construction work will not last longer than 30 working days or the volume of work will not exceed 500 person-days. In such instances, a Safety and Health Plan (either preliminary or developed) will not be required unless the project involves a Particular Risk as set out in Schedule 1 to the Regulations.

# 3.1.7 Duties of Project Supervisor Design Process (Safety File)

# "Regulation 13

- 13. The project supervisor for the design process shall
  - (a) prepare a safety file appropriate to the characteristics of the project, containing relevant safety and health information, including any information provided under Regulation 21, to be taken into account during any subsequent construction work following completion of the project, and
  - (b) promptly deliver the safety file to the client on completion of the project."

Under this Regulation the PSDP must prepare a Safety File for the project, and present it to the Client when the project is complete.

The Safety File is a record of information for the end user, which focuses on safety and health. The information it contains will alert those who are responsible for the structure and services in it of the significant safety and health risks that will need to be addressed during subsequent maintenance, repair or refurbishment, extension or other construction work or, indeed, its demolition (See Appendix 3 Lifecycle of the Safety and Health Plan and Safety File).

In order to prepare the Safety Fie, the PSDP should receive appropriate information from designers, Project Supervisor Construction Stage, and other duty-holders. This will require co-operation and co-ordination right from the start.

In undertaking this task, it helps if procedures are set up during the project for obtaining and collating the information to be included in the Safety File. These procedures may need to detail what information is to be collated and how it is to be collected, presented, and stored. Relevant information which could be included in the Safety File may include:

- construction drawings, specifications and bills of quantities, used and produced throughout the construction process;
- the general design criteria adopted, and details of the equipment and maintenance facilities within the structure;
- maintenance procedures and requirements for the structure;
- manuals, and where appropriate certificates, produced by specialist contractors and suppliers which
  outline operating and maintenance procedures and schedules for plant and equipment installed as part
  of the structure (typically lifts, electrical and mechanical installations, pressure vessels, control and
  instrumentation systems, window cleaning facilities); and
- details of the location and nature of utilities and services, including emergency and fire-fighting systems;

Some of the material for the Safety File comes from the information which the designers should provide. The PSDP also needs to obtain details from the PSCS in relation to details of services, plant, and the project equipment, which comprise part of the structure, from specialist supply and installation contractors, as well as from statutory bodies and local authorities, where appropriate, and to include the relevant information in the Safety File.

Clearly, a common sense approach may be needed, allowing the Safety File to be handed over as soon as practical after the completion certificate (i.e. practical completion) or similar document has been issued.

Where the Client has an immediate need for the Safety File at "hand-over" of the project, (i.e. practical completion), the PSDP should liaise with the Client and the PSCS to agree on what aspects of the Safety File need to be made available immediately.

It may be useful to compile the Safety File so that it is in two parts. One part will be more relevant for day-to-day use, e.g. operational and maintenance manuals. The other part is for longer-term use, e.g. drawings that will only be required when major alteration work is carried out. For ease of reference, it may be useful for the PSDP to produce a document, which summarises the key elements of the Safety File and acts as a quick guide to where the relevant information is stored.

When construction work is going to be carried out on a structure for which the client possesses a Safety File, he or she must make it available to the PSDP. The PSDP will then in turn need to give the designers the relevant information from the Safety File. Moreover, relevant parts of the Safety File may need to be incorporated into the preliminary Safety and Health Plan. The Safety File will need to be amended by the PSDP once the construction work has been completed (See Appendix 3 Lifecycle of the Safety and Health Plan and Safety File).

On a project which involves work on part of a structure for which there is no Safety File (e.g. maintenance or refurbishment work on a building that existed prior to the requirement for a Safety File), a Safety File must be created only in relation to the construction work carried out and not for the whole of the structure. Eventually, as further work is carried out on that structure, the Safety File will be added to and amended allowing an increasing detailed file to be developed.

3.1.8 Powers of Project Supervisor for the Design Process to Issue Directions

# "Regulation 14

- 14.(1) The project supervisor for the design process, so far as is necessary,
  - (a) may give directions to each person who is a designer, contractor or other relevant person, which directions, if carried out, will assist or enable compliance by the project supervisor with the duties imposed by these Regulations on the project supervisor, and"

The PSDP should arrange meetings or discussions between the different designers t, contractors, or other relevant person so as to aid the co-ordination of the design process. In order for the PSDP to comply with the duties in the Regulations, and with a view to protecting persons at work, it may be necessary for the PSDP to issue directions to other duty-holders, for example if the provision of information relating to the conclusions drawn by a designer when applying the General Principles of Prevention and design risk assessments is not forthcoming.

# "Regulation 14

14.(b) shall confirm the directions in writing, including a time frame for their execution, if the project supervisor considers that the person to whom the directions were given has not carried out the directions."

If a designer, contractor, or other relevant person does not comply with the PSDP's direction then the PSDP will confirm the original direction in writing.

# "Regulation 14

- 14.(2) If, in the opinion of the project supervisor for the design process, a designer, contractor or other relevant person has not carried out directions confirmed in writing under paragraph (1) (b), the project supervisor for the design process shall
  - (a) notify in writing the Authority, the client and the person to whom the direction was given of the opinion of the project supervisor, and
  - (b) include with the notification -
    - (i) a copy of the written confirmation under paragraph (1)(b), and
    - (ii) particulars of the response, if any, made by the designer, contractor or other relevant person to the directions."

If in the opinion of the PSDP a designer, contractor, or other relevant person fails to implement a confirmed written direction issued by the PSDP, the PSDP is required to notify, in writing, the Health and Safety Authority, the Client, and the person to whom the direction was issued of the alleged failure to comply. Such notification should include a copy of the written direction and any response from the relevant person in relation to the direction.

In general, notification to the Health and Safety Authority should be a last resort after all other reasonable avenues of discussions have been exhausted. A set procedure for dealing with written directions of this nature (with specific time limits) could be agreed at the negotiation stage of the contract. This might include a set

number of written warnings, a mutually agreeable appeal and arbitration procedure and other means of conflict resolution, as appropriate, depending on the nature of the work being undertaken. Only after exhaustive efforts to resolve the issue in question, should the "failure to comply" be taken as the outcome. However if "failure to comply" is the outcome, then the Health and Safety Authority and the Client should be notified.

# "Regulation 14

- 14.(3) The project supervisor for the design process shall ensure that
  - (a) each confirmation in writing of a direction given under paragraph (1)(b), and
  - (b) a copy of each associated notification to the Authority referred to in paragraph (2)

is retained with the safety and health plan."

The PSDP should include all written directions issued and any notification to the Health and Safety Authority in the Safety and Health Plan.

# 3.1.9 Does any Other Legislation Apply?

As in the case of the Client, anyone who exerts control to any extent over a place of work must exert that control in such a fashion as to ensure, so far as is reasonably practicable, the safety, health and welfare of workers at the place of work and those affected by the work being carried out at the place of work. A PSDP may exert such control, particularly if acting in the capacity of a designer. A PSDP is bound by the requirements of the Safety, Health and Welfare at Work Act 2005 in so far as its provisions apply to him or her.

# Part 4. Designers

# 4.1 Summary of Duties of the Designers

# **Designers must:**

- Identify any hazards that your design may present during construction and subsequent maintenance
- Where possible, eliminate the hazards or reduce the risk e.g. can roof-mounted equipment be placed at ground level or can guard-rails be provided to protect workers from falling?
- Communicate necessary control measures, design assumptions or remaining risks to the PSDP so they can be dealt with in the Safety and Health Plan;
- Co-operate with other designers and the PSDP or PSCS;
- Take account of any existing safety and health plan or safety file;
- Comply with directions issued by the PSDP or PSCS;
- Where no PSDP has been appointed, inform the client that a PSDP must be appointed;
- The Safety Health and Welfare at Work Act 2005 requires designers to ensure that the project is capable of being constructed to be safe, can be maintained safely and complies with all relevant health and safety legislation.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

# 4.1.1 What is Design and who are Designers?

The term "design" has a very broad definition in the Regulations. Design work is the preparation of drawings, particulars, specifications, calculations, the preambles and preliminaries of bills of quantities in so far as they contain specifications or other expressions of purpose, according to which a project, or any part or component of a project, is to be executed. It should be noted that the term "project" also has a very broad meaning under the Regulations, as have related terms such as "construction work" and "structure".

The design process is the process through which the design of a project is prepared and developed from initial concepts through to detailed specification, usually involving different teams and disciplines at various stages throughout the life of the project.

Designers are organisations or individuals who undertake design work for a project, including the design of temporary works. They are, therefore, in a unique position and can often make decisions that can significantly reduce the risks to safety and health during the construction stage and during subsequent use and maintenance.

### Designers include:

- those architects, civil and structural engineers, building services consultants, building surveyors, landscape architects and other design practices and individuals who contribute to, or have a responsibility for analysing, calculating, preparatory design work, designing, detailing, specifying and/or preparing bills of quantities for construction work;
- Mechanical, Electrical, Chemical and other engineers as appropriate to the project being undertaken;
   and
- those who specify or alter a design, or who specify the adoption of certain methods of work or the use of specific materials (this may include the Client).

Included within this definition also are temporary works designers, interior designers, specialist sub-contractors with design input such as engineering services sub-contractors and others involved in the choice of construction materials.

Temporary works may include such matters as trench shoring, scaffolding, propping, working platforms, gangways and access stairs/ladders, etc. Persons who make decisions on site in respect of these may be deemed to be designers.

Those employing, or in control of, people undertaking design work are themselves deemed to be designers.

The scope/areas of design responsibility of a designer is determined by his or her brief. It is essential that areas of responsibility between the various designers on a project are delineated as clearly as possible to avoid overlap or gaps which could be confusing and/or potentially dangerous. Once those areas of responsibility have been determined, the duties of each designer relating to safety and health can be clearly set down.

# 4.1.2 Duties of Designers

# "Regulation 15

15.(1) In carrying out work related to the design of a particular project, a designer shall –

- (a) take account of -
  - (i) the general principles of prevention, and
  - (ii) the relevant -
    - (I) safety and health plan, and
    - (II) safety file

prepared in accordance with these Regulations, and"

### 4.1.3 General Principles of Prevention

Regulation 15(1) states that all designers must take account of the General Principles of Prevention which are contained in Schedule 3 to the Safety, Health and Welfare at Work Act 2005 and any relevant Safety and Health Plan or Safety File. The Principles of Prevention are a hierarchy of risk elimination and reduction.

Eliminating hazards and reducing risk, if feasible, at design stage is the first step in managing safety and health on construction projects. All designers must take into account the existing hazards on the project relevant to areas of concern and consider these with respect to the potential new hazards generated by the design process for construction workers, end users, and members of the public.

The table below shows how the "general principles of prevention" can be related to proactively reducing risks experienced during the construction process and after completion of the project. Measures at the top of the hierarchy, e.g. the avoidance of risks or the combating of risks at source, are more effective than measures at the bottom, e.g. the use of personal protective equipment or safety signs or notices.

General Principles of Prevention	Comments
(a) The avoidance of risks.	Specifying materials or systems, which remove a hazard or hazards from the construction stage, while the structure is in use or maintained or during the demolition of the structure, which would otherwise have existed.
(b) The evaluation of unavoidable risks.	Construction is a high-risk sector and it is impossible to completely avoid risks. Therefore, unavoidable risks must be assessed so that control measures may be implemented to reduce the risks to an acceptable level. This is achieved by risk assessments for respective elements of the works undertaken by the permanent works designer, the specialist designer and the temporary works designer, and appropriate information communicated to the PSDP and PSCS.
(c) The combating of risks at source.	This principle indicates that it is better to designout, or minimise risks where practicable rather than leave them to be dealt with on site.

(d) The adaptation of work to the individual, especially as regards the design of places of work, the choice of work equipment and the choice of systems of work, with a view in particular to alleviating monotonous work and work at a predetermined work rate and to reducing their effect on health.	This principle refers to the design of places of work and ergonomic considerations of the individual., for example, the consideration of working at height during the construction stage.
(e) The adaptation of the place of work to technical progress.	This principle refers to the duty to maintain pace with technical progress in the workplace.
(f) The replacement of dangerous articles, substances, or systems of work by non-dangerous or less dangerous articles, substances, or systems of work.	The designer should consider the choice of materials or systems available in achieving a design objective in order to reduce risks as far as practicable (see (b) above).
(g) The development of an adequate prevention policy in relation to safety, health and welfare at work, which takes account of technology, organisation of work, working conditions, social factors, and the influence of factors related to the working environment.	The management of safety and health throughout the construction project can be documented through the Preliminary Safety and Health Plan (PSDP), Safety and Health Plan (PSCS), and the Safety File (PSDP). Reference should be made to any existing Safety File in the case of refurbishment projects or extensions.
(h) Priority to be given to collective protective measures over individual protective measures.	Reducing the risk to everyone exposed should be given preference to measures that only protect individuals. This might be done by designing-in measures to accommodate collective fall protection, such as nets (during construction) rather than facilities for the protection of the individual using harnesses.
(i) The giving of appropriate training and instructions to employees.	All employers are required to give appropriate training and instruction to their employees – including designers, so that they may discharge their duties under the Construction Regulations 2006 and other relevant statutory provisions.

Designers should systematically take account of these principles. They should, as far as reasonably practicable, include among the design considerations adequate regard to the need to:

- identify any hazards in the proposed design;
- eliminate any hazards that can reasonably be eliminated (without introducing other higher risks);
- evaluate and, where possible, reduce the risk associated with residual hazards, through the use of a risk assessment process of the design as referred to above giving preference to collective protection; and
- provide necessary information so that the PSDP, other designers, and contractors are aware of identified residual hazards and can take account of them.

Designers should be aware of hazards likely to cause injury. The Health and Safety Authority publishes annual statistics on the factors associated with construction injuries. In recent years most fatal injuries have been associated with (in descending order of frequency):

- · falling from a height;
- being struck by moving, often reversing, vehicles;
- · being struck by falling objects or collapsing structures;
- burial in a trench; and
- contact with overhead electric lines.

Thousands of construction workers are injured or become ill due to their work. In recent years, 56 out of every 1,000 construction workers were injured, and a further 32 out of every 1,000 become ill. The most common type of injuries, accounting for about 70 per cent of all non-fatal injuries, in descending order of frequency, were:

- physical stress or strain due to lifting, pushing, pulling of loads;
- slips, trips and falls on the level;
- struck by fall or collapse of material or structure; and
- · falling from a height.

Designers must critically assess their design proposals at an early stage, and then throughout the design process, so that the key construction safety and health issues are identified, integrated into the overall design process, and addressed as they go.

However, depending on the type of the project being undertaken, the nature of the risks may vary substantially from the risks referred to in the statistics quoted above. The risks must be assessed in the context of the project under consideration.

The designer should reassess the hazards and issue revised information to the PSDP where this becomes necessary during the development of the design. This is particularly the case during design and build contracts where there may be a large overlap in time between the design of the main elements of a project and the construction stage. It is recommended that it may, on occasion, be helpful if the designers participate in some safety and health meetings between the PSDP, PSCS, and contractor.

This section identifies some areas over which a designer may have direct influence and which he or she should consider along with the other design considerations. This is not an exhaustive list, nor is each item relevant to every project.

The relevant designer(s) should, as far as reasonably practicable:

- elect the position and design of structures to avoid or minimise risks from known site hazards, including:
  - o buried services, including gas pipelines, overhead and underground power lines;
  - o traffic movements to, from, around, and adjacent to the site;
  - contaminated ground (for example minimising disturbance by using shallow excavations and driven rather than bored piles – balancing that against the risk to health and welfare of operatives driving piles).

# **EXAMPLE OF MINIMISING WORKING ADJACENT TO HIGH-SPEED TRAFFIC:**

A steel footbridge was erected over a busy roadway. A single span was practicable and was chosen so as to reduce dangers to road vehicles. A lightweight design was utilised, enabling the bridge to be lifted into place during a single road closure held on a weekend night. There was minimal need for temporary works. The connections and lifting points were designed to allow speedy pre-assembly.

# **EXAMPLE OF MINIMISING DISTURBANCE TO CONTAMINATED GROUND:**

A development was built on a former industrial site that contained some contaminated ground. Records giving information on the history of the site were supplied by the client and these outlined the extent of the contamination. Contact with the contaminants was minimised by using driven piles to reduce ground disturbance; the designer having judged it better to accept the noise, etc of driven piles. Relevant information was passed to the Project Supervisor Design Process for inclusion in the Safety File. Services were placed in ducts to minimise contact with contaminants for future maintenance work.

- design out/minimise health hazards, for example:
  - o specify/permit the use of materials known to be less hazardous, e.g. solvent-free or low solvent adhesives and water-based paints;
  - avoid processes that create hazardous fumes, vapours, dust, noise or vibration, including disturbance of existing asbestos, cutting chases in brickwork and concrete, unnecessary breaking down cast insitu piles to level or scabbling concrete, hand digging tunnels, flame cutting or sanding areas coated with lead paint or cadmium;
  - o specify/permit the use of materials that are easy to handle;

- o design block paved areas to enable mechanical handling and laying of blocks;
- o design access areas to accommodate work-at-height equipment.

#### **EXAMPLE OF HEALTH ISSUES BEING ADDRESSED DURING DESIGN:**

An extensive refurbishment of an existing office block involved an upgrading of the steel frame to allow additional loading. The designer judged it best to encase the steel beams in concrete and post-tension, avoiding the health hazards of gas cutting and welding, and minimising dust and noise.

#### EXAMPLE OF MAKING ARRANGEMENTS TO PERMIT SAFER MEANS OF WORK AT A HEIGHT:

In preparing the drainage layout for a fast-track project, the drainage lines were arranged so that the drains could be laid without preventing access for the use of mobile elevating work platforms (MEWPs) that had been chosen to provide safe access for the erection of the structural steelwork.

- design out/minimise safety hazards, for example:
  - o the need for work at height, particularly where it would involve work from ladders, or where safe means of access and a safe place of work is not provided;
  - o fragile roofing materials and rooflights as in the Health and Safety Authority's Code of Practice for safety in Roofwork;
  - o deep or long excavations in public areas or on roads or motorways;
  - o materials that create a significant fire risk during construction. Consider prefabrication to minimise hazardous work or to allow it to be carried out in more controlled conditions off-site including:
    - > design/detail elements, such as structural steel work and process plant, so that sub-assemblies can be erected at ground level and then safely lifted into place;
    - > arrange for/permit cutting to size to be done off-site, i.e. under more controlled conditions, to reduce the amount of dust released.

#### EXAMPLES OF DESIGNING OUT THE NEED TO PERFORM WORK AT A HEIGHT:

A designer considered the use of a water-based paint for the exterior of a metal spire on a tall building to reduce exposure to solvents. She determined that the level of exposure to solvents from a solvent-based paint would be low and that the metalwork would require more frequent repainting with a water-based paint. She, therefore, concluded that it was better to specify the solvent-based paint because of the high risk of frequent working at height.

A designer had specified timber cladding on a building façade, including the gables. All the cladding, would be accessible for periodic maintenance by mobile elevating work platform, except for one gable adjacent to a narrow passageway. The cladding on the gables was replaced by a low maintenance anodised aluminum cladding.

- design-in features that reduce the risk of falling/injury where it is not possible to avoid work at height, for example:
  - o early installation of permanent access, such as stairs, to reduce the use of ladders;
  - o edge protection or other features that increase the safety of access and construction.

# **EXAMPLE OF DESIGNING FEATURES TO REDUCE RISKS FROM FALL FROM HEIGHT:**

In the design of a roof, the Permanent Works Designer increased the height of the parapet from 450 mm to 1,100 mm prior to application for planning permission to facilitate safety in both the construction of the roof and future maintenance on the finished roof and associated drains.

# **REDUCING THE SPEED OF TRAFFIC AT ROADWORKS:**

A pavement rehabilitation project was planned for a national primary road. The designer prepared a preliminary traffic management plan and identified that speed restrictions and signage, including variable message signs and repeater signs would be required. The PSDP informed the County Manager in good time who made an order under the Road Traffic Act 2004 specifying a special speed limit at the road works before construction commenced.

- design/detail to simplify construction, for example:
  - o provide lifting points and mark the weight and centre of gravity of heavy or awkward items requiring slinging both on drawings and on the items themselves;
  - o make allowance for temporary works required during construction;
  - o end bearings to slabs/beams that temporary end-propping;
  - o design/detail joints in vertical structural steel members so that bolting up can easily be done by someone standing on a permanent floor, and by use of seating angles to provide support while the bolts are put in place;
  - o design connections to minimise the risk of incorrect assembly.
- design to simplify future maintenance and cleaning work, for example:
  - o make provision for safe permanent access;
  - o design access areas for future maintenance which can accommodate work-at-height equipment;
  - o specify windows that can be cleaned from the inside;
  - o design plant rooms to allow safe access to plant and for its removal and replacement;
  - o design safe access for roof-mounted plant and roof maintenance.

# **EXAMPLE OF DESIGNING FOR SAFER FUTURE MAINTENANCE:**

When designing a glass-clad building with a large atrium, the path around the perimeter building was made wide enough to accommodate a mobile elevating work platform (MEWP) for window cleaning and façade maintenance. The atrium floor and entrance were specified to accommodate a mobile elevating work platform for maintenance of lighting fixtures and cleaning of the interior glass.

# 4.1.4 Providing Information

"Regulation 15

15.(b) provide in writing to the project supervisor for the design process all relevant information necessary for the project supervisor to carry out the project supervisor's duties under these Regulations."

Under Regulation 15(b), the designer must provide, in writing, to the PSDP, all information known and available to the designer, which is necessary for the PSDP to carry out his or her duties. This requires all designers, or any other person involved in work related to the design of a project, to supply to the PSDP in timely manner necessary information so that the PSDP can co-ordinate the activities of all designers engaged on the project and communicate effectively with the PSCS and other duty-holders.

Designers should similarly provide appropriate information about aspects of the design that could create risks during future construction work or maintenance. This should then be incorporated into the Safety File by the PSDP. (See Appendix 3 Lifecycle of the Safety and Health Plan and Safety File).

One method of recording compliance with these duties, and maintaining a record of the various steps taken during the design process, is to complete design certificates (see Appendix 2) to affirm the safety of the works at the different stages. These also facilitate the checking of the design and the communication of the design assumptions to other designers. If this method of recording is not considered appropriate, then an alternative method should be used to allow for communication, recording, and verification of information regarding the project, so as to be able to demonstrate compliance with the regulations.

Appendix 2 contains templates which could be used by the various different designers, including specialist designers, on a project to allow for unambiguous communication of their assumptions and assurances to the PSDP. This will help the PSDP to fulfil his or her co-ordination role, and will also demonstrate the designer's compliance with the legislation. It is recommended that a permanent works designer should complete a permanent works design certificate with respect to the adequacy, in the context of safety and health, of their design.

Appendix 2 also contains a form, which should be used in the case of temporary works design It is critical that temporary works designers and contractors base their temporary works design with due regard to the assumptions made in relation to loadings and construction sequence It is recommended that the temporary works designer should complete a temporary works design certificate to facilitate the provision of adequate information to all parties to allow the structure to be built in safety.

Forms, when completed, should be given to the PSDP who should then verify the coordination of the various designers and pass the forms onto the PSCS and others as appropriate.

# 4.1.5 Designer Co-operation

# "Regulation 15

- (2) In carrying out work related to the design of a particular project, a designer shall
  - (a) co-operate with the project supervisor for the design process or the project supervisor for the construction stage, as appropriate, to enable that project supervisor to comply with these Regulations,
  - (b) co-operate with other designers, as appropriate, to enable them to comply with these Regulations in relation to the project, and"

The designer must co-operate with the Project Supervisors and other designers to allow those functions be discharged effectively. This co-operation could be in the form of provision of information, or in attendance at meetings or revisions of designs to improve aspects of safety and health on site.

In addition, designers must also provide information to allow the PSDP to compile a Safety File as mentioned earlier. This might include information on plant or materials specified in the building. design assumptions, and calculations pertinent to the functioning, maintenance, and possible extension of the building should also be forwarded in this context.

The relevant designer should also identify to the PSDP demolition hazards for inclusion in the Safety and Health File, for example:

- sources of substantial stored energy, including pre- or post-tensioned members;
- stability requirements;
- alterations that have changed the original "structure".

# 4.1.6 Complying with Directions

"Regulation 15

15.(c) comply with all directions from the project supervisor for the design process or the project supervisor for the construction stage, that are issued pursuant to Regulation 14 or 20, as appropriate."

The PSDP or PSCS may issue directions to any designer in relation to the fulfilment of the Designer's duties, where necessary in order that the Project Supervisor may comply with his or her own duties under the Construction Regulations 2006 (See section 3.1.8 and 5.2.2). Designers are required to comply with any such reasonable direction from the PSDP or PSCS.

Such directions may deal with issues relating to taking account of the General Principles of Prevention, or with the co-ordination of design activities between different designers.

Any such direction must be reasonable. It would not be reasonable, for instance, for a Project Supervisor to direct a designer to do something which in the designer's opinion he or she is not competent to do, or which relates to matters which the designer does not effectively control, or which the designer would be legally constrained from doing.

In the event that a Designer fails to implement a direction from a Project Supervisor, the Project Supervisor must issue the direction in writing.

If in the opinion of the PSDP, a designer or other relevant person fails to implement a confirmed written direction issued by the PSDP, the PSDP is required to notify, in writing, the Health and Safety Authority, the Client and the person to whom the direction was issued of the alleged failure to comply. Such notification should include a copy of the written direction and any response from the relevant person in relation to the direction.

Where the Health and Safety Authority investigates this matter, the focus of the investigation will normally be to determine if the relevant parties have complied with their legal duties, and to take any necessary enforcement action. The Authority will not conduct any process of mediation or adjudication between the parties. Where such an investigation commences, a designer or Project Supervisor may forward any additional responses to the instruction to allow due consideration to be given to all relevant sides in the matter.

#### 4.1.7 Detailed Provision of information

### "Regulation 15

- 15.(3) In carrying out work related to the design of a particular project, a designer shall promptly provide in writing to the project supervisor for the design process or for the construction stage, whichever is appropriate, all information
  - (a) about the project that is known to the designer regarding particular risks to the safety, health and welfare of persons at work, including but not limited to the risks referred to in Schedule 1,
  - (b) regarding the nature and scope of the project to the extent necessary to enable the project supervisor to comply with these Regulations,
  - (c) about the project that is necessary for that project supervisor to prepare the safety file, and
  - (d) that is known to that person and is necessary to ensure, so far as is reasonably practicable, the safe construction of the design for the project."

Designers must provide the PSDP or the PSCS, as appropriate, with such information as is known to the designer regarding the 'particular risks' set out in Schedule 1 to the Regulations.

Designers should provide information on significant hazards including:

- hazardous or flammable substances specified in the design, e.g. epoxy grouts, fungicidal paints, or those containing isocyanates;
- specific problems and solutions, for example arrangements to enable the removal of a large item of plant from the basement of a building;
- structures that create particular access problems, such as domed glass structures;
- heavy or awkward prefabricated elements likely to create risks in handling;
- areas needing access where normal methods of tying scaffolds may not be feasible, such as facades that have no opening windows and cannot be drilled;
- the features of the design and sequences of assembly or disassembly that should be apparent at the design stage and that are crucial to safe working;
- unusual stability concepts.

Information provided must be specific to the project. In relation to structural stability for example, where a design is (or should be) based:

- on a particular erection or construction sequence;
- on the installation and removal of falsework, temporary propping or formwork and the sequencing of this;
- · any loading restrictions during construction;
- · and where these factors, might not be apparent to a contractor,

designers (including as appropriate temporary works, permanent works, and specialist designers) should make available to the PSCS, PSDP and contractors, pertinent information to allow construction to proceed safely in accordance with the appropriate design intent.

In the case of a structure, which for any particular reason might become unstable, the pertinent relevant information might be the temporary works required to ensure stability during the construction, alteration, or demolition of the whole or any part of the structure. This might include details of bracing during construction of steel- or concrete-frame buildings, temporary support of composite steel or concrete elements, or information regarding removal of critical load-bearing components.

It would also be prudent to inform other relevant designers of this type of information, to allow them take appropriate measures in their design to accommodate safety, health and welfare.

# 4.1.8 Making Clients Aware of their Duties

### "Regulation 15

15.(4) For the purposes of paragraph (3), if no project supervisor is known to the designer to have been appointed for the project, the designer shall provide the information referred to in that provision to the appropriate contractor instead of to a project supervisor."

As referred to above in relation to duties of a Client, in some circumstances there will be no legal requirement for a Client to appoint Project Supervisors. In these circumstances, a designer should provide the information required under Regulation 15(3) to the appropriate contractor.

# "Regulation 15

15.(5) If a designer is not aware of the appointment of a project supervisor for the design process, the designer shall promptly inform the client of the client's duties under Regulation 6."

In the event that a designer carrying out design work on a project is not aware of the appointment of the PSDP, the designer is required to inform the Client of his or her duties in relation to the appointment of Project Supervisors.

# 4.1.9 Does any other Legislation Apply?

As in the case of other duty-holders, anyone who exerts control to any extent over a place of work must exert that control in such a fashion as to ensure so far as is reasonably practicable the preservation of the safety, health and welfare of workers at the place of work and those affected by the work being carried out at the place of work. A designer may exert controls other than those envisaged by the Construction Regulations, and the requirement of the Safety Health and Welfare at Work Act 2005 and other relevant statutory provisions will also apply.

Section 17 (2) of the Act also requires a person who designs a project for construction work to ensure, so far as is reasonably practicable, that the project:

- (a) is designed and is capable of being constructed to be safe and without risk to health;
- (b) can be maintained safely and without risk to health during use; and
- (c) complies in all respects, as appropriate, with the relevant statutory provisions.

# Part 5. Project Supervisor Construction Stage

# 5.1 Summary of Duties of the Project Supervisor Construction Stage (PSCS)

# The Project Supervisor Construction Stage must:

- Co-ordinate the implementation of the construction regulations by contractors;
- · Organise co-operation between contractors and the provision of information;
- Co-ordinate the reporting of accidents to the Authority;
- Notify the Authority before construction commences where construction is likely to take more than 500 person days or 30 working days;
- Provide information to the site safety representative;
- Co-ordinate the checking of safe working procedures;
- Co-ordinate measures to restrict entry on to the site;
- Co-ordinate the provision and maintenance of welfare facilities;
- Co-ordinate arrangements to ensure that craft, general construction workers, and security workers have a Safety Awareness card, e.g. Safe Pass and a Construction Skills card where required;
- Co-ordinate the appointment of a site safety representative where there are more than 20 persons on site;
- Appoint a safety adviser where there are more than 100 on site;
- Provide all necessary safety file information to the PSDP;
- Monitor the compliance of contractors and others and take corrective action where necessary;
- Notify the Authority and the client of non-compliance with any written directions issued;
- The PSCS may issue directions to designers or contractors.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

#### 5.1.1 What is a Project Supervisor Construction Stage?

The Project Supervisor Construction Stage is responsible for managing and co-ordinating the construction phase safety and health issues on site. Regulations 6 to 29 of the Construction Regulations 2006, and particularly Regulation 16, provide a framework for this process, with the requirement that the key risk management issues be set out in writing in the construction phase Safety and Health Plan. It is important to note that the presence of a Project Supervisor Construction Stage (PSCS) does not relieve other contractors/employers of their obligation to comply with their statutory safety and health obligations.

# 5.1.2 Duties of the Project Supervisor Construction Stage (Safety and Health Plan)

# "Regulation 16

- 16. The project supervisor for the construction stage shall
  - (a) further develop, as necessary, before the commencement of the construction work, the safety and health plan for the construction site prepared under Regulation 12, in this Regulation called "the plan",
  - (b) make adjustments to the plan where required to take account of the progress of the work and any changes which occur,
  - (c) take account as regards the plan, at all times during the construction stage, of section 20 of the Act and of other work activities taking place on the site,
  - (d) include in the plan specific measures concerning work which involves a particular risk, including but not limited to any risk referred to in Schedule 1,
  - (e) include in the plan, rules for the execution of the construction work which rules are required for the purposes of the safety, health and welfare of persons at work, and
  - (f) ensure that the plan and any rules contained in it are in writing and that they are brought to the attention of all contractors and other relevant persons who may be affected by them."

The PSCS must develop a suitable Safety and Health Plan for the project, prior to the commencement of construction work. The plan provides the blueprint for managing and co-ordinating safety and health during

construction. The plan needs to explain how the key safety and health issues will be managed. It must be relevant to the particular project and should be built on the Safety and Health Plan prepared on a preliminary basis by the PSDP.

The PSCS should develop this Safety and Health Plan so that it:

- incorporates the approach to be adopted for managing safety and health during the construction stage;
- takes account of the relevant sections of the Safety Statements prepared by the different contractors under Safety, Health and Welfare at Work Act 2005. (The PSCS should check the safety statements prepared by the contractors to ensure that they relate to the site in question and the work activities to be carried out);
- includes the specific control measures for dealing with Particular Risks;
- takes account of other work activities taking place on the site (e.g. where the construction work overlaps with non-construction activities);
- incorporates the common arrangements (including emergency procedures and welfare as well as details regarding control, co-ordination, and management of shared equipment, such as scaffolding and lifting appliances);
- document the arrangements for ensuring effective co-operation and co-ordination;
- includes arrangements for monitoring compliance with the Safety and Health Plan and with safe working procedures;
- includes arrangements for checking that persons on site have received appropriate safety and health information and training, e.g. Safe Pass and CSCS, and that consultation arrangements are in place;
- includes arrangements for ensuring effective communications between all parties, and the arrangements for appointing a site safety representative (this may include matters such as frequency of project or site meetings and how safety and health is to be dealt with at these meetings, frequency of site safety representative inspections, etc);
- includes information and arrangements for the welfare of workers (effective washing, welfare and changing facilities are a vital part of health precautions, for example, against cement contact dermatitis and contamination by other hazardous substances);
- is modified as necessary as work progresses and as changes occur.

# **EXAMPLE OF COMMUNICATION WHERE THE CLIENT HAS STAFF ON SITE:**

New processing machinery was being installed in a manufacturing plant. The PSDP had included requirements in relation to the safety of the workforce and plant in the pre-tender Safety and Health Plan. The plan included details of those parts of the site that the client would continue to occupy, information about the permit-to-work system, emergency procedures, and traffic management arrangements. Regular meetings were held to bring about good communication and co-ordination.

As much of the Safety and Health Plan as possible should be developed before construction work starts, particularly the procedures and arrangements which are applicable to the generality of the construction stage and early work packages, the Safety and Health Plan must be kept up to date, modified, and altered in the light of changing circumstances and standards achieved on site and as the construction work progresses. If the contracting arrangements are such that design and preparation for many of the work packages is not complete at the start of the construction stage, the parts of the Safety and Health Plan relating to those packages need to be developed. Safety statements and information from contractors starting work during the different work stages of a project will invariably mean that parts of the Safety and Health Plan have to be amended and updated before construction of such work packages commences.

Reviews of parts of the Safety and Health Plan may also need to be made if there are design changes or alterations, unforeseen circumstances or if variations to planned circumstances arise. It is vital that such changes are notified to all parties working on site who will be affected.

As an integral part of developing the Safety and Health Plan, the PSCS must check that a hazard identification and risk assessment has been carried out for each of the main stages during construction. To do this properly, information, including method statements and safety statements, will generally be needed from the contractors who will be working at the site. If risks arise because a number of contractors are exposed to a common hazard (e.g. from site transport, shared scaffolding, unguarded openings or lifting operations), the PSCS needs to ensure that the risks are avoided, or if this is not reasonably practicable, effectively controlled and managed.

In addition, the PSCS must bring the Safety and Health Plan and any rules that are laid down in it to the attention of all contractors and others who may be affected by them.

#### **EXAMPLE OF REVISION OF A SAFETY AND HEALTH PLAN:**

A roofing contractor was selected after the Safety and Health Plan was initially written. He proposed that all roofwork was to be carried out using MEWPs rather than use of nets which was set out in the plan initially. The plan now has to be revised to take into account, and to put in place, new checks for the revised method of work, e.g. checks on PF Forms for the lifting appliances, checks on driver training, and checks on ground conditions, etc. The Project Supervisor Construction Stage must include reasonable rules for the management of construction work in the Safety and Health Plan, which others on the site must follow. These may cover issues such as restricted areas, permit-to-work systems, systems of work, co-ordination arrangements, and emergency plans. In some cases they are needed to reflect the requirements of clients.

# **EXAMPLE OF PROVISION OF INFORMATION TO WORKERS:**

In addition to a site-specific safety induction, every worker who entered a site was provided with a small pocket card detailing the site safety and health rules. Any new rules introduced as a result of work being carried out on the site were clearly displayed at the site entrance and the cards were reprinted and re-issued.

# **EXAMPLE OF THE PROVISION OF INFORMATION TO CONTRACTOR AND WORKERS:**

On a busy construction site employing several contractors, the key details of the construction phase Safety and Health Plan were transferred to a wall chart and displayed in the site office and in the canteen. This enabled all visitors and workers on site to find relevant information quickly and easily. The chart was reviewed on a weekly basis and any necessary revisions made.

5.1.3 Duties of the Project Supervisor Construction Stage (Co-ordination and Co-operation)

"Regulation 17

- 17.(1) If more than one contractor is engaged in a project, the project supervisor for the construction stage shall
  - (a) co-ordinate the implementation during construction of the general principles of prevention when
    - (i) deciding technical or organisational aspects, and
    - (ii) estimating the time required for completing the work or work stages,"

The PSCS must co-ordinate the application of the "General Principles of Prevention" by contractors when estimating timeframes to complete specific parts of the works. This also applies to any organisational aspects within the project that might have an impact on the management of safety and health

# 5.1.4 General Principles of Prevention

When decisions are being made about how the construction work will be undertaken, it is the duty of the PSCS to make sure that the General Principles as laid out in Schedule 3 to the Safety, Health and Welfare at Work Act 2005 are used in the evaluation of what methods will be used. These principles should also be taken into account for estimating time frames to complete specific parts of the works. This also applies to any organisational aspects within the project that might have an impact on the management of safety and health. If required, the PSCS can issue written directives regarding compliance with the Regulations.

# **EXAMPLES OF APPLYING THE GENERAL PRINCIPLES OF PREVENTION**

General Principles of Prevention	Comments and Examples
(a) The avoidance of risks.	The insertion of openings and channels in floors during the pouring of concrete to avoid the hazards of dust, noise and fall from height associated with core drilling and chasing after concrete has set.
(b) The evaluation of unavoidable risks.	Construction is a high-risk sector and it is impossible to completely avoid risks. Therefore, unavoidable risks need to be assessed so that control measures may be implemented to reduce the risks to an acceptable level. This is achieved by risk assessments for each element of the works undertaken by contractors and sub-contractors and communicated to the PSCS or other contractors as appropriate.
(c) The combating of risks at source.	Fabricating assemblies and craning into place to eliminate the hazard of working at height during fabrication.
(d) The adaptation of work to the individual, especially as regards the design of places of work, the choice of work equipment and the choice of systems of work, with a view, in particular, to alleviating monotonous work and work at a predetermined work rate and to reducing their effect on health.	This principle refers to the ergonomic issues associated with work of the individual. This principle might involve the production of templates or brackets to hold drilling or cutting equipment to reduce strain. It might also involve the sequencing of work so that heavy equipment could be craned into place and not manually lifted up stairs afterwards. This might involve the PSCS and contractors co-ordinating their procurement and delivery to bring about delivery of equipment before dismantling of the crane.
(e) The adaptation of the place of work to technical progress.	This principle refers to the duty to maintain pace with technical progress in the workplace.
(f) The replacement of dangerous articles, substances, or systems of work by non-dangerous or less dangerous articles, substances, or systems of work.	The PSCS should consider the choice of materials or systems available in achieving a construction objective, in order to reduce risks as far as practicable (see (b) above).
(g) The development of an adequate prevention policy in relation to safety, health and welfare at work which takes account of technology, organisation of work, working conditions, social factors, and the influence of factors related to the working environment.	The management of safety and health throughout the construction stage can be documented through the, Safety and Health Plan and the Safety File, where available. Reference should be made to any existing Safety File in the case of refurbishment projects or extensions.
(h) The giving of priority to collective protective measures over individual protective measures.	Reducing the risk to everyone exposed should be given preference to measures that only protect individuals. This might be done by the PSCS co-ordinating measures such as guard rails to give collective fall protection for personnel installing, for example, formwork and false work for in situ concrete floors or installing precast concrete flooring slabs (or other elements of a structure where work at height exposes individuals to the risk of falling).
(i) The giving of appropriate training and instructions to employees.	Giving appropriate training (not just Safe Pass and CSCS courses as listed in the Regulations) for all work, particularly work with implications for the safety, health and welfare of the workers and others.

# 5.1.5 Co-ordination of Relevant Provisions of Regulations

### "Regulation 17

- 17.(b) co-ordinate the implementation of any relevant requirements of these Regulations in order that contractors and others
  - (i) apply the general principles of prevention in a consistent manner, in particular as regards the matters specified in Schedule 2 to these Regulations,
  - (ii) monitor the consistent application of subparagraph (i), and
  - (iii) where required, follow the provisions of the safety and health plan."

The Project Supervisor Construction Stage is also required to co-ordinate the implementation of the relevant requirements of the Construction Regulations 2006 in order that contractors consistently apply the general principles of prevention, paying particular attention to the requirements in Schedule 2 to the Regulations and following the Safety and Health Plan.

If a PSCS needs to take corrective action to remedy non–compliance, the PSCS must follow the requirements of Regulation 20 which is discussed in detail below. The general principles of prevention should also be taken into account when evaluating the methods of construction to be used and estimating time frames to complete specific parts of the works. This also applies to any organisational aspects within the project that might have an impact on the management of safety and health.

In co-ordinating the implementation of safe working procedures, the PSCS must proactively manage the interaction between contractors, personnel, and any other parties who have an impact on the construction process during the construction stage. If a PSCS needs to take corrective action to remedy non-compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

# **Schedule 2 to the Construction Regulations 2006**

# Requirements to be applied to construction as regards the general principles of prevention

- a) keeping the construction site in good order and in a satisfactory state of cleanliness;
- b) choosing the location of workstations bearing in mind how access to these workplaces is obtained and determining routes or areas for the passage and movement of equipment;
- c) the conditions under which various materials are handled;
- d) technical maintenance, pre-commissioning checks and regular checks on installations and equipment with a view to correcting any faults which might affect the safety and health of persons at work;
- e) co-operation between employers and self-employed persons; the demarcation and laying-out of areas for the storage of various materials, in particular where dangerous materials or substances are concerned;
- f) the conditions under which the dangerous materials used are removed;
- g) the storage and disposal or removal of waste and debris;
- h) the adaptation, based on progress made with the site, of the actual period to be allocated for the various types of work or work stages;
- i) interaction with industrial activities at the place within which or in the vicinity of which the construction site is located.

# EXAMPLE OF CO-ORDINATING THE ARRANGEMENTS BETWEEN CONTRACTORS AND TAKING APPROPRIATE ACTION:

A four-storey building which is being constructed has an inner leaf of block work and an outer leaf of brickwork. The scaffolding contractor is scheduled to arrive and erect scaffolding for the construction of the brick outer leaf. The bricklayer is relying on his site-specific method statement, which was submitted to the PSCS, to ensure that the scaffold is to be erected prior to the commencement of the inner leaf.

# 5.1.6 Organising Co-ordination and Co-operation

# "Regulation 17

17.(c) organise cooperation between contractors (including successive contractors on the same site) and others and the co-ordination of their activities in relation to a project with a view to protecting persons at work and preventing accidents and injury to health and monitor such cooperation and co-ordination,"

The PSCS should have an integrated approach to safety and health on site so that all contractors involved with the project work together to ensure the safety of all workers on the site. This involves co-ordinating the activities of all contractors throughout the duration of the construction period.

Bringing about co-ordination and co-operation between contractors is an ongoing task throughout the project which should be addressed and reviewed at project or site meetings and should include the following:

- emergency arrangements and procedures (e.g. fire, including means of escape and first aid provisions);
- arrangements for the provision and use of plant and equipment which will be used by a number of contractors (e.g. cranes, hoists and scaffolding);

co-ordinating the work of contractors so as to minimise the effect of one activity on another from the point of view of safety and health;

giving the contractors relevant safety and health information relating to the project.

Where plant, equipment, and welfare facilities are shared by a number of contractors, the PSCS should coordinate the arrangements concerning its provision, use, and maintenance.

If a PSCS needs to take corrective action to remedy non-compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

# "Regulation 17

17.(d) organise the implementation of section 21 of the Act, in particular in relation to the provision of information, monitor such implementation and, if information provided is inadequate, take appropriate corrective action as set out in Regulation 20,"

The Project Supervisor Construction Stage is also responsible for co-ordination of the requirement of section 21 of the Safety, Health and Welfare at Work Act 2005 which requires employers who share a workplace to co-operate with each other in implementing the necessary safety and health provisions. In particular, it requires employers to inform each other of any risks involved in their work activities. The Construction Regulations 2006 give the PSCS the role of co-ordinator to bring about compliance with this requirement.

If a PSCS needs to take corrective action to remedy non-compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

# "Regulation 17

- 17.(e) coordinate the implementation by contractors of Regulation 24(d) in relation to any accident or dangerous occurrence and keep available for inspection a record of any information provided to the project supervisor under that Regulation, and
  - (i) monitor such coordination, and
  - (ii) if the Authority requests information in relation to that record, comply with the request as soon as possible,
- 17.(f) provide access to appropriate information regarding safety, health and welfare required under this Regulation to the site safety representative,"

The PSCS must put in place arrangements to co-ordinate the reporting of any fatal accident, injury, condition, or dangerous occurrence. These arrangements must include monitoring and corrective action elements.

If a PSCS needs to take corrective action to remedy non-compliance in relation to 17(1)(e), the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

The site safety representative must be given access to the above information.

"Regulation 17

17.(g) coordinate arrangements for checking the implementation of safe working procedures and monitor the implementation of those arrangements, and"

Plans and procedures are no use if they are treated as a paper exercise. To help to avoid injuries, they must be a practical aid to the management of safety and health on site. The PSCS has a particular role in both implementing and monitoring the Safety and Health Plan and safe working procedures to check that they are implemented in practice.

There is a clear onus on the PSCS to have practical arrangements in place for checking and monitoring safe working procedures to ensure the safety and health of persons throughout the course of a project. These arrangements should be documented in the Safety and Health Plan and will generally include:

- emergency arrangements and procedures (e.g. fire, including means of escape and first aid provisions);
- arrangements for the provision and use of plant and equipment which will be used by a number of contractors (e.g. cranes, hoists and scaffolding);
- co-ordinating the work of contractors so as to minimise the effect of one activity on another from the point of view of safety and health;
- giving the contractors relevant safety and health information relating to the project.

Where plant, equipment and welfare facilities are shared by a number of contractors, the PSCS should co-ordinate the arrangements concerning its provision, use and maintenance.

If a PSCS needs to take corrective action to remedy non–compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

#### **EXAMPLE OF FAILURE TO CO-ORDINATE THE ARRANGEMENTS FOR SAFE WORKING PROCEDURES:**

A PSCS requested the site scaffolder to strike dismantle a scaffold from around a three-storey building. A few hours after the work was complete, a roofer fell off the sloping roof at the exact location from where the scaffold was struck. He fell 12 metres and suffered fatal injuries.

5.1.7 Preventing Unauthorised Persons Accessing Construction Sites

"Regulation 17

17.(h) coordinate measures to permit authorised persons only on to the construction site and monitor such coordination."

The PSCS must take reasonable measures to ensure that no unauthorised person enters the work area, and this should be documented in the Safety and Health Plan. Only people who are explicitly authorised, either individually or collectively, by the PSCS or designated person should be allowed on site.

The PSCS will need to have measures in place so that only authorised people are allowed into any area where construction work is taking place.

Typical authorised people might include:

- contractors or employees carrying out construction work;
- those who need to enter the work area for purposes connected with the work (e.g. architects, engineers and representatives of the client);
- individuals or organisations who have a statutory right to enter the work area (e.g. Health and Safety Inspectors, Building Control Inspectors and others who have statutory powers to enter the site);
- employee representatives.

Authorised people should have the relevant site rules explained to them and undertake any necessary induction training. Some authorised visitors may need to be supervised while on site or visiting specific areas.

How access is controlled depends on the nature of the project, the risks and the location. The boundaries of all sites should be physically defined, where practical, by suitable barriers .The type of barriers should reflect the nature of the site and its surroundings.

In deciding on the most appropriate exclusion methods to prevent unauthorised persons entering the site, the following matters should be a consideration:

- the location of the site, for example, is it located in an urban area and close to extensive housing or a school?
- is it in a remote area, is there a right of way across the site, or have the public or others access to the site (e.g. street works or work carried out in an occupied premises)?
- sites that are in, or next to other work areas;
- if it is not practicable to erect hoarding around the site, can hazardous areas be cordoned off?
- new houses are being built on a development where some houses are already occupied;
- are children and other vulnerable people nearby?
- what is the nature of the work and the risk to persons not authorised to enter the site?
- how can unauthorised persons be excluded from work areas, for example is it sufficient for persons to report to the site agent/foreman to gain authorisation, or should a "pass" scheme be set up so that only those who have a pass are allowed on to the site?
- is on-site security is required?

The effectiveness of the arrangements needs to be reviewed in the light of experience. In particular, their adequacy should be carefully reviewed if there is evidence of children playing on, or near the site. On a housing site, it is also appropriate for the PSCS to advise the client on the appropriate sequence of selling houses to members of the public. A logical sequence of house selling will enable the PSCS to fence and secure the section of any housing development still under construction. This is particularly important given that new houses will often be purchased by new families with young children who might be exposed to the dangers of construction activity adjacent to their houses.

If a PSCS needs to take corrective action to remedy non-compliance, he or she must follow the requirements of Regulation 20 which are discussed in detail below.

# **EXAMPLE OF CO-ORDINATING ACCESS TO A MOTORWAY PROJECT:**

On a project to construct a 20 km motorway, the PSCS assesses that it was not feasible to securely fence the entire project. In order to comply with his obligations regarding controlling access to the site, the PSCS fenced off all bridges under construction and all dangerous excavations. In addition, he placed various secure compounds at strategic locations for locking up plant, equipment and construction material when not in use. The PSCS initiated a regime where any significant movement of plant or reversing vehicles was monitored continuously by appropriately positioned banksmen to reduce, as far as reasonably practicable, any risk to workers and others. He also employed security personnel to carry out continuous random checks on workers on site to check that they had been checked on site and accounted for centrally. The PSCS also maintained an electronic swipe card system to log all personnel entering and leaving the site and included in the site rules the need to check in and out with security when entering and leaving the site. During non-work periods, the PSCS maintained roaming security patrols on the site to check for unauthorised access.

#### "Regulation 17

17.(2) The project supervisor for the construction stage may appoint a competent person as health and safety co-ordinator for the construction stage to assist in undertaking the duties specified in Regulation 16 and in this Regulation."

The PSCS may appoint a competent person as health and safety co-ordinator for the construction stage to assist in carrying out duties in relation to the preparation of a Safety and Health Plan and the general duties as referred to in section 2.4.1 above. This, however, does not relieve the Project Supervisor of the

responsibility to ensure that these duties are carried out. Likewise, the project supervisor may assign certain functions to named individuals, but again it is the responsibility of the Project Supervisor to ensure the provisions of Regulation 17 are complied with.

The appointment and competence of a co-ordinator and/or the assignment of certain functions to named individuals are the responsibility of the PSCS and does not affect the client's duties. However, the client should be kept informed when a co-ordinator or co-ordinators is appointed.

The Regulations do not prevent the appointment of more than one co-ordinator where it is considered appropriate.

#### 5.1.8 Site Welfare Facilities

### "Regulation 17

- 17.(3) The project supervisor for the construction stage shall
  - (a) coordinate arrangements which facilitate the provision and maintenance, in an appropriate condition, of site welfare facilities for all persons at work on the construction site, in accordance with Part 14, and
  - (b) monitor the implementation of the arrangements."

The PSCS must co-ordinate arrangements for the provision and maintenance of welfare facilities for all persons at work on a construction site. The criteria for the provision of various facilities to workers on a site should be rationalised by being linked to the numbers employed on the site rather than the number of workers employed by individual employers.

The arrangements and rationale underscoring the provision of welfare facilities should also be documented in the Safety and Health Plan, and the PSCS should have a workable system in place to maintain all the welfare facilities in a hygienic and healthy fashion. Provision should be put in place from the outset for hot and cold running water, eating, and washing, drying and changing facilities, and adequate facilities for heating food. Flush toilets should be provided unless, in very limited circumstances, it is not reasonably practicable to access a sewer connection or install and operate a septic tank.

If a PSCS needs to take corrective action to remedy non-compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

# "Regulation 17

17.(4) The project supervisor for the construction stage shall take appropriate corrective action as set out in Regulation 20 where contractors or others do not comply with one or more of paragraphs (1)(b) to (e), (g) and (h) and (3)(b) of this Regulation."

The PSCS must take corrective action as set out in Regulation 20 where a contractor or others are not complying with the requirements of Regulation17(1)(b) to (e), (g) and (h) and (3)(b) as indicated above.

# 5.1.9 Keeping of Records

# "Regulation 17

- 17.(5) The project supervisor for the construction stage shall maintain and keep available for inspection a record of the names of persons at work at the construction site to whom Regulation 19 applies as provided by each contractor under Regulation 25(2)."
- 17.(6) The project supervisor for the construction stage shall keep appropriate records and copies of relevant documents in relation to paragraphs (1)(e) and (4) and Regulations 16 and 22 for 5 years after the date of preparation of the records or documents."

All workers undertaking specified safety critical duties must have training under the Construction Skills Certification Scheme (CSCS), and be in possession of CSCS registration cards or equivalent approved cards.

Details of Safe Pass and CSCS courses and their availability can be obtained from the local FÁS Services to Business Manager. Although the PSCS does not have direct responsibility to ensure that other contractor's employees get Safe Pass and CSCS certification, nevertheless the PSCS must have a system to effectively check that relevant personnel on site to which this requirement applies are in possession of the appropriate certification. Where workers do not have the appropriate certification, the PSCS should exclude these workers from site. The PSCS must maintain records, for a period of five years, of personnel on site with Safe Pass and the CSCS (or acceptable equivalent) training. The contractor should supply these records to the PSCS.

#### 5.1.10 Traffic and Pedestrian Routes

### "Regulation 17

17.(7) The project supervisor for the construction stage shall also comply with Regulation 87(2), if applicable."

Regulation 87(2) deals with the segregation of site traffic and pedestrians so as to ensure safe access around the site by organising and controlling traffic and pedestrian routes, and where appropriate provide a traffic and pedestrian management plan.

# "Regulation 87

- 87.(2) On all construction sites on which transport vehicles, earth-moving or materials-handling machinery or locomotives are used, the project supervisor for the construction stage shall ensure that
  - (a) safe and suitable access ways are provided for them, and
  - (b) traffic and pedestrian routes are so organised and controlled, including, where appropriate, by the provision of a traffic and pedestrian management plan, as to secure their safe operation."

# 5.2 Duties of the Project Supervisor Construction Stage (Safety Adviser)

# "Regulation 18

- 18. If there are normally more than 100 persons on a construction site at any one time engaged in construction work, the project supervisor for the construction stage shall appoint in writing a full-time competent safety adviser for that site to
  - (a) advise the project supervisor and contractors as appropriate as to the observance of the requirements of the relevant statutory provisions, and
  - (b) exercise a general supervision of the observance of those requirements and the promotion of the safe conduct of work generally."

Where there are more than 100 persons on site at any one time engaged in construction work, the PSCS must appoint, in writing, a full-time Safety Adviser. The PSCS must make reasonable enquires to check the competence of the person selected to advise the PSCS on matters of safety, health and welfare and to exercise a general level of supervision on safety, health and welfare related issues.

The Safety Adviser should be experienced, preferably with management experience and/or safety and health experience in construction and possess the appropriate safety and health training, e.g. a recognised Safety and Health Management in Construction certificate, higher certificate or degree in Safety, Health and Welfare at Work, or their equivalent. It is also highly desirable that the Safety Adviser would have experience of the type of work being undertaken.

The presence on site of the Safety Adviser does not relieve any employer or contractor of their own statutory duties to plan, manage, monitor, and take corrective action as required.

# 5.2.1 Duties of the Project Supervisor Construction Stage, (Safety Awareness and Skills Certification)

### "Regulation 19

- 19.(1) The project supervisor for the construction stage shall
  - (a) coordinate arrangements to ensure that persons at work on the construction site to whom Regulation 4(2) applies are each in possession of a valid safety awareness registration card referred to in Schedule 3,
  - (b) coordinate arrangements to ensure that those persons who engage in tasks specified in Schedule 4 are each in possession of an appropriate valid construction skills registration card referred to in that Schedule, and
  - (c) monitor the implementation of the arrangements and take any necessary corrective action as set out in Regulation 20."

The PSCS should have a system in place for ensuring and that all craft and general construction workers on site have an up-to-date Safe Pass card and appropriate Construction Skills Certification cards where required. This system must have a monitoring and corrective action element to it and should be documented in the Safety and Health Plan.

If a PSCS needs to take corrective action to remedy non-compliance, the PSCS must follow the requirements of Regulation 20 which are discussed in detail below.

**Note:** Site office staff, visiting architects, visiting inspectors, etc are not specifically required under the Regulations to receive Safe Pass training but it is strongly recommended that they do receive that training.

5.2.2 Powers of the Project Supervisor Construction Stage to Issue Directions

# "Regulation 20

- 20.(1) The project supervisor for the construction stage, so far as is necessary,
  - (a) may give directions to each person who is a contractor, designer, or other relevant person, which directions, if carried out, will assist or enable compliance by the project supervisor with the duties imposed by these Regulations on the project supervisor, and"

The PSCS should arrange meetings or discussions between the different contractors working on a project, designers or other relevant persons so as to aid the co-ordination of the design process. In order for the PSCS to comply with the duties in the Regulations, and with a view to protecting persons at work, it may be necessary for the PSCS to issue directions to other duty-holders, for example if a contractor is not implementing safe working procedures.

### "Regulation 20

20.(1)(b) shall confirm the directions in writing, including a time frame for their execution, if the project supervisor considers that the person to whom the directions were given has not carried out the directions."

If a contractor, designer or other relevant person does not comply with the PSCS's direction, then the PSCS will confirm the original direction in writing.

# "Regulation 20

- 20.(2) If, in the opinion of the project supervisor for the construction stage, a contractor, designer, or other relevant person has not carried out directions confirmed in writing under paragraph (1)(b), the project supervisor shall
  - (a) notify in writing the Authority, the client and the person to whom the direction was given of the alleged failure, and

- (b) include with the notification -
  - (i) a copy of the written confirmation under paragraph (1)(b), and
  - (ii) particulars of the response, if any, made by the contractor, designer or other relevant person to the directions."

If, in the opinion of the PSDP, a contractor, designer or other relevant person fails to implement a confirmed written direction issued by the PSCS, the PSCS is required to notify, in writing, the Health and Safety Authority, the Client and the person to whom the direction was issued of the alleged failure to comply. Such notification should include a copy of the written direction and any response from the relevant person in relation to the direction.

In general, notification to the Health and Safety Authority should be a last resort after all other reasonable avenues of discussions have been exhausted. A set procedure for dealing with written directions of this nature (with specific time limits) could be agreed at the negotiation stage of the contract. This might include a set number of written warnings, a mutually agreeable appeal and arbitration procedure and other means of conflict resolution, as appropriate, depending on the nature of the work being undertaken. Only after exhaustive efforts to resolve the issue in question, should the "failure to comply" be taken as the outcome. However if "failure to comply" is the outcome, then the Health and Safety Authority and the Client should be notified.

Additional procedures may be used where there is a high risk involved and immediate compliance is required.

"Regulation 20

- 20.(3) The project supervisor for the construction stage shall ensure that a copy of each
  - (a) confirmation in writing of a direction given under paragraph (1), and
  - (b) associated notification to the Authority referred to in paragraph (2)

is retained with the safety and health plan."

The PSCS should include all written directions issued and any notification to the Health and Safety Authority in the Safety and Health Plan.

# **EXAMPLE OF ENFORCEMENT OF SITE RULES:**

A PSCS had drawn up the Safety and Health Plan which included a requirement that all excavators used as cranes, with their lifting gear have to be accompanied by the test certificates and weekly inspection forms. These were to be kept in the cab of the excavator. The PSCS as part of his monitoring of compliance finds out that two machines on site have no certificates available, and that the weekly inspection form has not been kept up to date. He issues a verbal instruction to the earthworks contractor to stop work until these certificates are in place. On checking back, he finds that the two machines are still operating without the certificates. He then issues a written direction to the contractor to stop work until the certificates are available. The contractor continues to use the machines on site. The PSCS then instructs the contractor to remove the machines from site and informs the Authority, the Client and the Contractor, enclosing a copy of the written direction.

5.2.3 Duties of the Project Supervisor Construction Stage (Safety File)

"Regulation 21

- 21.(1) The project supervisor for the construction stage of a project shall
  - (a) coordinate arrangements among contractors to ensure the provision of relevant information, in writing, necessary for the project supervisor for the design process to complete the safety file referred to in Regulation 13, monitor the implementation of the arrangements and take any necessary corrective action, as set out in Regulation 20, and
  - (b) provide in writing to the project supervisor for the design process all relevant information necessary for that project supervisor to complete the safety file referred to in Regulation 13."

The PSCS must promptly supply all relevant information in writing to the PSDP in order for the PSDP to complete the Safety File.

The PSCS must co-ordinate arrangements among contractors so that information that must be included in the Safety File goes to the PSDP, who is required to prepare and complete the Safety File.

"Regulation 21

21.(2) For projects where the design stage commenced before the coming into operation of these Regulations, if, having regard to Regulation 1(3), a project supervisor for the design process has not been appointed, the project supervisor for the construction stage shall prepare the safety file as required by Regulation 13."

If, as part of the phasing-in of the Regulations, a PSDP has not been appointed, the responsibility with regard to the preparation and hand-over of the Safety File rests with the Project Supervisor Construction Stage.

5.2.4 Duties of the Project Supervisor Construction Stage (Notification to the Authority)

"Regulation 22

- 22.(1) If construction work on a construction site is planned to last longer than 30 working days or the volume of work is scheduled to exceed 500 person-days, the project supervisor for the construction stage, before the work begins, shall give notice promptly to the Authority in an approved form, sent either
  - (a) by registered post, or
  - (b) as may be directed from time to time by the Authority.
  - (2) The project supervisor for the construction stage shall cause to be clearly displayed on the construction site and, if necessary, periodically cause to be updated, the particulars required to be in any notice under paragraph (1)."

The Project Supervisor Construction Stage must notify the Health and Safety Authority of any site where:

- the construction work is planned to last longer than 30 working days; or
- the volume of construction work is scheduled to exceed 500 person-days.

A working day is any day on which any construction work is carried out, even if the work is of short duration, or the day is a holiday, or over a weekend. A person-day is one individual, whether they be supervisors or other employee(s), carrying out work for one normal shift. The notice must be submitted before the commencement of work on the site. The particulars required to be notified are set out in the Approved Form AF2 shown in Appendix 1. The Health and Safety Authority intends to implement on-line notification of projects during 2006.

# **Display of Notice**

A copy of the information which the Project Supervisor Construction Stage has to send to the Health and Safety Authority must be clearly displayed at the site. The information should be in a position where it can easily be read by people working on the site, e.g. on the entrance gate to the site, or in site huts. The information on the notice must also be updated as necessary.

Where the notice has been properly completed and submitted to the Authority it would normally be sufficient to display a copy of the completed form (in A4 size) with the information on the form being updated as necessary.

5.2.5 Site Safety Representative

"Regulation 23

23.(1) The project supervisor for the construction stage shall –

- (a) co-ordinate the development and application by contractors of arrangements, made in consultation with their employees, which will enable them and their employees to co-operate effectively in promoting and developing measures in relation to their safety, health and welfare on the construction site and in ascertaining the effectiveness of such measures, taking account of section 26 of the Act, and
- (b) facilitate, where more than 20 persons are normally employed at any one time on a construction site at any stage of a project, in co-operation with contractors and persons employed on the project, the appointment of a site safety representative from among the employees of the contractor or contractors undertaking the project in accordance with the procedure outlined in Schedule 5."

The PSCS must facilitate the putting in place of a Site Safety Representative where there are more than 20 people working on site.

- If a Site Safety Representative is elected by the workers on a site, the Project Supervisor Construction Stage must recognise that person as such.
- If a safety representative has previously been selected under the Safety, Health and Welfare at Work
  Act 2005 by the employees of a particular contractor, the PSCS must take the views of all workers on
  the site into account when confirming that person as Site Safety Representative.
- If the workers have not elected a Site Safety Representative, the PSCS must facilitate an election.
- In the event of no safety representative being elected, the PSCS must seek nominations and deem the nominee whom he determines to have most support to be the Site Safety Representative.

If no nominee is forthcoming, the PSCS must provisionally nominate a Site Safety Representative. Construction Regulations, 2001.

# "Regulation 23

- 23.(2) The project supervisor for the construction stage shall ensure that a site safety representative, for the purposes of performing functions relating to safety, health and welfare at a construction site, has access to
  - (a) the risk assessment carried out under section 19 of the Act,
  - (b) information relating to accidents and dangerous occurrences required to be reported under the relevant statutory provisions, and
  - (c) any information arising from protective and preventive measures taken under the relevant statutory provisions or provided by
    - (i) the Authority,
    - (ii) a person prescribed under section 33 of the Act, or
    - (iii) a person referred to in section 34(2) of the Act.
  - (3) The project supervisor for the construction stage shall inform the site safety representative when an inspector enters the construction site for the purpose of carrying out an inspection."

The PSCS must provide the safety representative with information on:

- risk assessments;
- preventative and protective measures;
- accidents and dangerous occurrences.

The PSCS should inform the Site Safety Representative when a Health and Safety Authority inspector arrives on site.

#### "Regulation 23

- 23.(4) The project supervisor for the construction stage shall
  - (a) inform the site safety representative of the time and venue of all site safety meetings, and
  - (b) facilitate the attendance of the site safety representative at the meetings.

The PSCS must inform the Site Safety Representative of all safety meetings and facilitate their attendance at these meetings.

# "Regulation 23

- 23.(5) A site safety representative for a construction site may inspect the whole or any part of the construction site
  - (a) after giving reasonable notice to the project supervisor for the construction stage and to the contractor employing the site safety representative, or
  - (b) immediately, in the event of an accident, dangerous occurrence or imminent danger or risk to the safety, health and welfare of any person.
  - (6) The project supervisor for the construction stage, the contractor employing the site safety representative and the site safety representative, having regard to the nature and extent of the hazards at the construction site, shall agree as to the frequency of inspections to be carried out under paragraph (5), which agreement shall not be unreasonably withheld by the project supervisor or the contractor."

The Site Safety Representative may inspect all or part of a construction site once he or she has given reasonable notice to the PSCS and to their employer. The PSCS, the Contractor and the Site Safety Representative should agree the frequency of inspections. The frequency will depend on the size, nature and the hazards on the site.

# "Regulation 23

#### 23.(7) A site safety representative may -

- (a) investigate accidents and dangerous occurrences provided that he or she does not interfere with or obstruct the performance of any statutory obligation required to be performed by any person under any of the relevant statutory provisions,
- (b) after giving of reasonable notice to the project supervisor for the construction stage and to the contractor employing the site safety representative, investigate complaints relating to safety, health and welfare at work made by any employee whom he or she represents,
- (c) accompany an inspector who is carrying out an inspection of the construction site under section 64 of the Act other than an inspection for the purpose of investigating an accident or dangerous occurrence.
- (d) at the discretion of the inspector concerned, accompany an inspector who is carrying out an inspection of the construction site under section 64 of the Act for the purpose of investigating an accident or dangerous occurrence,
- (e) at the discretion of the inspector concerned, where an employee is interviewed by an inspector with respect to an accident or dangerous occurrence at the construction site, attend the interview at the request of the employee,
- (f) on any matter relating to safety, health and welfare at the construction site, make representations to the project supervisor for the construction stage and to any contractor on the construction site,
- (g) make oral or written representations to inspectors on matters relating to safety, health and welfare at the construction site including, but not limited to, the investigation of accidents or dangerous occurrences,
- (h) receive advice and information from inspectors on matters relating to safety, health and welfare at the construction site, or
- (f) consult and liaise on matters relating to safety, health and welfare at work with any other safety representatives who may be appointed at the construction site concerned."

The provisions of the Regulations relating to the role of the Safety Representative are covered in detail in section 3.2 below.

#### "Regulation 23

23.(9) The project supervisor for the construction stage and, as appropriate, any contractor involved in the project shall take account of any representations made to the project supervisor by a site safety representative on any matter affecting the safety, health and welfare at work of any person at work at the construction site."

In co-ordinating a project, the PSCS must take account of reasonable representations made by the Site Safety Representative and should act on representations where they are reasonable. The representations must be in connection with matters of safety, health or welfare. The PSCS should not allow a situation to develop where the role of the Site Safety Representative and the Safety Officer become confused or overlap. The Site Safety Representative makes representations, whereas the management on site (including, where appropriate, the Safety Officer) must take account of the representations.

# "Regulation 23

- 23.(10) The contractor employing a site safety representative shall afford the site safety representative such time off from his or her duties as may be reasonable, having regard to all the circumstances, without loss of remuneration, to enable the representative to
  - (a) acquire the knowledge necessary to discharge his or her functions as a site safety representative, and
  - (b) discharge his or her functions as a site safety representative under this Regulation."

The contractor employing the Site Safety Representative must afford him or her enough time to perform the role of Site Safety Representative effectively. The Site Safety Representative should also be facilitated with regard to training to allow him or her gain the knowledge to operate effectively. The contractor should also be aware that the Site Safety Representative must not suffer any discrimination because of performing that role.

#### 5.2.6 Does any other Legislation Apply?

As in the case of the client, anyone who exerts control to any extent over a place of work must exert that control in such a fashion as to ensure, so far as is reasonably practicable, the preservation of the safety, health and welfare of workers at the place of work and those affected by the work being carried out at the place of work. A PSCS may exert such control, particularly if he or she is acting in the capacity of contractor or designer. A PSCS is bound by the requirements of the Safety, Health and Welfare at Work Act 2005 and other associated legislation, in so far as its provisions apply to him or her. Section 17(3) of the 2005 Act also stipulates that a person who carries out construction work shall ensure, so far as is reasonably practicable, that it is constructed to be safe and without risk to health and that it complies in all respects, as appropriate, with the relevant statutory provisions.

# Part 6. Contractors

# **6.1 Summary of Duties of Contractors**

#### Contractors must:

- Co-operate with the PSCS;
- Provide a copy of your safety statement and relevant information to the PSCS;
- Promptly provide the PSCS with information required for the safety file;
- · Comply with directions of Project Supervisors;
- Report accidents to the Authority and to the PSCS where an employee can not perform their normal work for more than three days;
- Comply with site rules and the safety and health plan and ensure that your employees comply;
- Identify hazards, eliminate the hazards, or reduce risks during construction;
- Facilitate the Site Safety Representative;
- Ensure that relevant workers have a safety awareness card and a construction skills card where required;
- Provide workers with site specific induction;
- · Appoint a safety officer where there are more than 20 on site or 30 employed;
- · Consult workers and Safety Representatives;
- Monitor compliance and take corrective action.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

#### 6.1.1 Who are Contractors?

A contractor is defined in the Construction Regulations 2006 as an employer whose employees undertake, carry out, or manage construction work, or any person who carries out or manages construction work for a fixed or other sum and who supplies the materials and labour (whether his or her own labour or that of another) to carry out such work, or who supplies the labour only.

Contractors must co-operate with the PSCS in managing the work to ensure safety and health on site.

Most of the Construction Regulations 2006 cover both employers and the self-employed (many of whom will also be contractors) without distinction. People working under the day-to-day control of others are usually their employees for safety and health purposes, even if they are treated as self-employed for tax and Pay Related Social Insurance (PRSI) purposes. Sections 8 to 12 of the Safety, Health and Welfare at Work Act 2005 also places duties on the self-employed, depending on their role in a particular project.

#### 6.1.2 Duties of Contractors

"Regulation 24

# 24. A contractor shall –

- (a) comply with Parts 3 to 14,
- (b) co-operate with the project supervisor for the construction stage to enable the project supervisor to comply with the relevant statutory provisions,"

In addition to the general management duties in Part 3 of the Construction Regulations 2006, the contractor also has the duty to comply with the technical requirements relating to excavations, scaffolding and other specific element of the Regulations.

The PSCS must co-ordinate the execution of the project to maintain the safety, health and welfare of those working on the project and those affected by the construction work associated with the job. To this end the contractor has a duty to co-operate with the Project Supervisor Construction Stage in the discharging of the PSCS's role.

# 6.1.3 Providing Information: Accidents and Dangerous Occurrences

### "Regulation 24

- (d) provide the project supervisor for the construction stage with -
  - (i) information in relation to any accident or dangerous occurrence of which the contractor is required, under the relevant statutory provisions, to give notification or to report, and
  - (ii) a copy of the required notification or report,"

The Safety, Health and Welfare at Work (General Application) Regulations require the employer (generally a contractor on a construction site) to notify any death, reportable injury, or dangerous occurrence to the Health and Safety Authority. In addition, the contractor should formally inform the Project Supervisor Construction Stage, and provide him or her with a copy of the notification of any notifiable incident which occurs to the contractor or his employees or is associated with the contractor's work on site.

The contractors should co-operate with the PSCS in compiling information on non-reportable incidents and near misses so that the PSCS can take a proactive approach towards monitoring, reviewing and improving safety, health and welfare on site.

# 6.1.4 Safety File

# "Regulation 24

(e) promptly provide the project supervisor for the construction stage, in writing, with all relevant information necessary to prepare the safety file,"

The Safety File is a record of information for the end user, which focuses on safety and health. The information it contains will alert those who are responsible for the structure and services in it of the significant safety and health risks that will need to be addressed during subsequent maintenance, repair or refurbishment, extension, or other construction work or, indeed, its demolition Contractors who have information relevant to the Safety File must promptly pass it on to the Project Supervisor Construction Stage who in turn passes it on to the PSDS to include in the Safety File.

# 6.1.5 Compliance with the Safety and Health Plan, Rules and Directions

# "Regulation 24

- (f) comply with directions given under these Regulations by the project supervisor for the design process or by the project supervisor for the construction stage,
- (g) bring to the attention of the contractor's employees any rules applicable to them contained in the safety and health plan,
- (h) comply with the safety and health plan and any rules in the plan that are applicable to the contractor or to the contractor's employees,
- (i) ensure, so far as is reasonably practicable, compliance by the contractor's employees with the rules referred to in paragraph (h),"

To allow the PSCS to co-ordinate safety, health and welfare on site, the contractor must comply with any reasonable instructions from the Project Supervisor Construction Stage. Additionally, contractors and their employees must comply with relevant parts of the Safety and Health Plan including any rules in the Safety and Health Plan that are required for the purposes of securing the safety, health and welfare of persons at work.

To achieve this, contractors need to provide their employees with relevant information including rules contained in the Safety and Health Plan, monitor the way in which they carry out their work, to ensure that the safety and health precautions described in the Safety and Health Plan are followed in practice by the contractor and their employees.

The PSDP or PSCS may issue directions to any designer in relation to the fulfilment of the Designer's duties, where necessary in order that the Project Supervisor may comply with his or her own duties under the Construction Regulations 2006 (see section 3.1.8 and 5.2.2). Contractors are required to comply with any such reasonable directions from the PSDP or PSCS.

Where contractors find that their employees, or self-employed people that they are supervising, are not complying with the Safety and Health Plan, they must take appropriate action to remedy the situation. Such monitoring may identify shortcomings in the Safety and Health Plan. Where this is the case, the contractor should ensure that the PSCS is notified.

# 6.1.6 General Principles of Prevention

# "Regulation 24

24.(j) apply, where appropriate, the general principles of prevention in a consistent manner, in particular in relation to the matters specified in Schedule 2, in order to protect the safety, health and welfare of persons at work, and"

Schedule 2 to the Regulations lists a series of factors which should be taken into account when planning how construction work should be undertaken. The following is a list of the factors considered essential to the day-to-day management of safety, health and welfare on construction projects.

# **Schedule 2 to the Construction Regulations 2006**

# Requirements to be applied to construction as regards the general principles of prevention

- a) keeping the construction site in good order and in a satisfactory state of cleanliness;
- b) choosing the location of workstations bearing in mind how access to these workplaces is obtained and determining routes or areas for the passage and movement of equipment:
- c) the conditions under which various materials are handled;
- d) technical maintenance, pre-commissioning checks and regular checks on installations and equipment with a view to correcting any faults which might affect the safety and health of persons at work;
- e) co-operation between employers and self-employed persons; the demarcation and laying-out of areas for the storage of various materials, in particular where dangerous materials or substances are concerned;
- f) the conditions under which the dangerous materials used are removed;
- g) the storage and disposal or removal of waste and debris;
- h) the adaptation, based on progress made with the site, of the actual period to be allocated for the various types of work or work stages;
- i) interaction with industrial activities at the place within which or in the vicinity of which the construction site is located.

#### 6.1.7 Site Safety Representative

# "Regulation 24

(k) facilitate the performance by the site safety representative of the functions of the site safety representative under Regulation 23."

All contractors must take account of any reasonable relevant representations made by the Site Safety Representative. In addition, the contractor employing the Site Safety Representative must afford him or her enough time to perform the role of Site Safety Representative effectively. The Site Safety Representative should also be facilitated with regard to training to allow him or her gain the knowledge to operate effectively. The contractor should also be aware that the Site Safety Representative must not suffer any discrimination because of performing that role.

# 6.1.8 Safety Awareness and Construction Skills Cards

# "Regulation 25

25.(1) Every contractor or other person under whose direct control persons work on a construction site shall ensure that each of those persons, in this Regulation called a "worker" –

- (a) is in possession of a valid safety awareness registration card referred to in Schedule 3 if Regulation 4(2) applies to the worker,
- (b) is in possession of an appropriate valid construction skills registration card referred to in Schedule 4 if the worker engages in any of the tasks specified in that Schedule, and
- (c) has received site-specific safety induction instruction if Regulation 4(3) applies to the worker.
- (2) On the date upon which a worker first starts work on a construction site, the contractor or other person under whose direct control the worker is working shall
  - (a) ask to see the appropriate valid registration card referred to in paragraph (1), and
  - (b) furnish to the project supervisor for the construction stage written confirmation that the worker is in possession of
    - (i) the valid registration card, and
    - (ii) other relevant certificates and documentation required under the relevant statutory provisions."

While the PSCS has an overarching responsibility to have systems in place to check if workers have a Safe Pass card, the final responsibility rests with the employer of the person to ensure that the person is in possession of an up-to-date Safety Awareness Card or an equivalent card.

In addition, contractors must provide site induction training for all persons under their control.

Original Safe Pass cards must not be retained by the contractor but must be retained by the person to which they refer. The contractor may keep a photocopy for record purposes.

Contractors must ensure that their employees, or anyone under their direct control, carrying out any tasks listed in Schedule 4 to the Regulations are in possession of the appropriate Construction Skills Certification Scheme (CSCS) cards, or an equivalent card. These cards demonstrate that the worker has received training and/or certification in the relevant skills.

The tasks requiring CSCS certification are as follows:

- Scaffolding basic;
- Scaffolding advanced;
- Mobile tower scaffold where the employee has not been trained in either Scaffolding Basic or Scaffolding Advanced;
- Tower crane operation;
- Self erecting tower crane operation where the employee has not been trained in Tower crane operation
- Slinging/Signalling (This involves slinging of loads on lifting equipment and signalling plant drivers regarding the placing of loads);
- Telescopic Handler Operation;
- Tractor/Dozer Operation;
- Mobile Crane Operation;
- Crawler Crane operation;
- Articulated dumper operation;
- Site dumper operation;
- 180° Excavator operation;
- Mini-digger operation where the employee has not been trained in 180° Excavator operation;
- 360° Excavator operation;
- Roof and wall cladding/sheeting;
- Built-up roof felting;
- Signing, lighting and guarding on roads;
- · Locating under-ground services;
- Shotfiring.

Other tasks may be prescribed officially in the future.

The requirements under these Regulations for the issue of a valid safety awareness registration card are successful completion of any one of the following:

- the FÁS Safe Pass training programme;
- an equivalent safety awareness scheme approved by FÁS;
- an equivalent safety awareness scheme in another Member State of the European Communities approved by FÁS.

The requirements for the issue of a valid construction skills registration card under the Construction Skills Certification Scheme are possession of –

- the relevant FETAC award under the Construction Skills Certification Scheme,
- an equivalent FETAC award, or
- an equivalent award approved by a body in another Member State of the European Communities recognised by FÁS as equivalent to the FETAC award under the Construction Skills Certification Scheme. (e.g. the UK Construction Industry Training Board (CITB) or the Construction Plant Competence Scheme (CPCS).

The programme-givers relevant to (b) and (c) above are generally listed on the FÁS (www.fas.ie) and Health and Safety Authority (http://www.hsa.ie) websites.

Advanced scaffolding is defined as:

- the erection and dismantling of independent scaffolding;
- the erection and dismantling of sheeted scaffolding;
- the erection and dismantling of scaffolding with a larger number of platforms than recommended in the manufacturer's instructions or relevant code of practice;
- the erection and dismantling of scaffold loading bays;
- the erection and dismantling of scaffolding with different tie spacing than recommended in the manufacturer's instructions or relevant code of practice;
- the erection and dismantling of scaffolding under which the public will have access;
- the erection and dismantling of a buttress or truss-out scaffold;
- the erection and dismantling of a saddle and stack scaffold with access tower;
- the method of constructing and loading a cantilever (counterbalance) scaffold;
- the erection and dismantling of scaffolding with work platforms seven metres or more above the level
  of the base of the scaffolding; or
- other tasks which might be prescribed in the future.

If tasks classified as "advanced scaffolding" are to be undertaken by a "basic" scaffolder, then the task must be undertaken under the supervision of an advanced scaffolder. The ratio of supervisor to trainee in this context should be no more than 1:1.

In addition, the contractor must supply to the PSCS details of all his or her workers (on the day they start on site) who are required by the Construction Regulations to have Safe Pass and relevant CSCS cards confirming that the have such cards.

# 6.1.9 Appointment of Safety Officers

# "Regulation 26

- 26.(1) Every contractor who normally has under direct control at any one time more than 20 persons on a construction site, or 30 persons engaged in construction work, shall appoint in writing, taking into account section 18 of the Act, one or more competent persons, as may be appropriate, as safety officers to undertake the following duties:
  - (a) to advise the contractor as to the observance of the requirements of the relevant statutory provisions;
  - (b) to exercise a general supervision of the observance of the requirements of the relevant statutory provisions and the promotion of the safe conduct of work generally;
  - (c) to co-operate with any safety adviser appointed under Regulation 18 in relation to safety, health and welfare at work on the project.

- (2) The duties assigned to any person appointed under paragraph (1), including duties other than those mentioned in paragraph (1), shall not be such as to prevent that person from discharging with reasonable efficiency duties assigned under that paragraph.
- (3) Nothing in these Regulations shall be construed as preventing the same person or persons being appointed as safety officer under this Regulation for a group of sites or 2 or more contractors from jointly so appointing the same person or persons.
- (4) Nothing in these Regulations shall be construed as preventing a person appointed as a safety adviser under Regulation 18 on a particular site being appointed as a safety officer for that site in accordance with this Regulation."

A contractor who has normally more than 20 employees on a site, or more than 30 engaged in construction on various sites, must appoint a competent Safety Officer to advise and supervise adherence to safety and health requirements. A competent Safety Officer is a person who has experience of the work being undertaken, and knowledge of how to control the hazards associated with this work as well as training (such as the IOSH Managing Safely in Construction programme or other safety management programmes). A Safety Adviser may also act as the Safety Officer for that site.

When appointing a Safety Officer the contractor should ensure that the Safety Officer has adequate time and resources to discharge the functions specified in the Construction Regulations 2006. Contractors may appoint the same person as Safety Officer for a group of sites or a number of contractors may appoint the same person as Safety Officer. It is recommended that the PSCS be informed of the appointments and contact details.

6.1.10 Erection and Installation of Plant or Equipment

"Regulation 27

- 27. The relevant contractor shall
  - (a) erect, install, modify, work or use any plant or equipment to which any of the relevant statutory provisions apply in a manner which complies with those provisions, and
  - (b) erect or alter any scaffold in a manner which complies with any relevant requirements of any of the relevant statutory provisions, having regard to the purpose or purposes for which the scaffold is designed at the time of erection or alteration."

All plant, equipment and scaffold on site must be put in place, or altered on site, in accordance with good practice. Where plant such as cranes or other lifting equipment is substantially altered or repaired, it should be re-examined and certified and the results of these examinations and tests recorded on the prescribed forms. Scaffolding should only be altered by appropriately trained personnel and the scaffold should be re-examined and the results documented after such alterations.

### 6.2 Consultation

"Regulation 28

- 28. The relevant contractor shall ensure consultation on the construction site with the contractor's employees, their safety representative and the site safety representative in relation to the requirements of these Regulations in accordance with the provisions of section 26 of the Act, taking account of the need, whenever necessary, for co-operation and co-ordination among
  - (a) employees,
  - (b) the safety representatives of the different contractors, and
  - (c) the site safety representative

with a view to promoting and developing measures for protecting safety, health and welfare of persons at work on the site."

Consultation is considered in Part 3 of these guidelines.

# Part 7. Employees and other Persons at Work

# 7.1 Summary of Duties of Employees

#### The Employee must:

- Comply with site rules as contained in the Safety and Health Plan;
- Make proper use of safety equipment, such as safety helmet, harness and footwear,
- Undertake training in relation to Safe Pass and Construction Skills Certification (and any other training in relation to safety and health) without loss of remuneration;
- Produce Safe Pass Card or equivalent card and relevant CSCS cards or equivalent cards when requested to do so by the Project Supervisor Construction Stage, their employer, or by a Health and Safety Authority inspector;
- Comply with the duties of employees under the 2005 Act.

(The bullet points above are a brief summary, for information only, and are not a legal interpretation of the Regulations)

# 7.1.1 Who is an Employee?

An "employee" is defined by 2005 Act as meaning a person who has entered into or works (or, in the case of a contract which has been terminated, worked) under a contract of employment with an employer. Fixed term and temporary employees are included in the definition.

Where there is confusion as to a person's status, "tests" may be applied to clarify the situation, such as:

- if the person receives a payslip, this will normally have the employer's details on it and thus the person in receipt of the payslip can be considered an employee;
- if PRSI contributions are being paid by an employer as identified on the annual P60 form;
- where the individual can be given instructions as to how to do a job, not merely what to do (this test may be particularly useful for construction);
- even where individuals cannot be directed how to do a job, they may still be regarded as an employee if they share the same facilities as other staff, and are part of a team.
- if one considers the "substance rather than form" test, the description of the contractual relationship will not be as important as the reality of the situation.

### 7.1.2 Duties of Employees and other Persons at Work

# Regulation 29

- 29.(1) Every person engaged in work to which these Regulations apply shall
  - (a) comply with these Regulations,
  - (b) co-operate in carrying out the requirements of these Regulations,"

The duties of employees, temporary employees and agency workers under the Construction Regulations 2006 are additional to the duties on employees under the Safety, Health and Welfare at Work Act 2005 and the Safety, Health and Welfare at Work (General Application) Regulations.

Employees, including agency workers are required under the Safety, Health and Welfare at Work Act 2005 to co-operate with other duty-holders, so far as is necessary, to enable those persons to comply with the relevant statutory provisions. This means that employees, in addition to co-operating with their employer, must co-operate with other employers sharing the same work place and with duty-holders with specific responsibilities such as the Project Supervisor Construction Stage. Employees have a general duty to comply with the Regulations and co-operate with their employer. Workers must co-operate with their employer and others such as the PSCS to enable them to comply with safety and health legislation for the benefit of all workers on site.

#### "Regulation 29

29.(c) report without unreasonable delay any defect, discovered by the person, in the plant or equipment to which these Regulations apply, which might endanger safety, health and welfare, to the person's employer or immediate supervisor, or to the contractor responsible for the plant or equipment,"

Employees also have a duty to report, without delay, to their employer, PSCS, or responsible contractor, any dangerous plant or machinery or any defect in the place of work or system of work which might endanger safety, health or welfare, of which they become aware.

### "Regulation 29

29.(d) comply with all rules applicable to the person in the safety and health plan,"

Workers must co-operate with their employer, and others such as the PSCS, to enable them to comply with safety and health legislation for the benefit of all workers on site.

#### "Regulation 29

29.(e) make proper use of any safety helmet, harness or any other personal protective equipment provided for the person's safety and health,"

Employees must use suitable protective clothing or equipment (when it is made available) in such manner as to provide the protection intended. They should also co-operate in any systems that are in place for safe storage of PPE. An employee (or any other person) should not intentionally or recklessly interfere with or misuse any protective clothing, equipment, etc provided for securing the safety, health or welfare of persons arising out of work activities

### "Regulation 29

29.(f) make proper use of any work equipment supplied, and"

The employee must use all work equipment in the manner for which the equipment was intended. Employees should always be aware that misuse of plant and equipment could have unforeseen consequences and could lead to potential injuries to themselves or others on site.

### 7.1.3 Safety Awareness and Construction Skills Cards

#### "Regulation 29

29.(g) show relevant registration cards referred to in Regulations 19 and 25 when requested by the person's employer or the project supervisor for the construction stage."

Employees must produce Safe Pass and relevant CSCS cards when requested to do so by the Project Supervisor Construction Stage or by their employer.

### "Regulation 29

- (2) A person shall not -
  - (a) in applying for a registration card or certificate as referred to in Schedules 3 and 4, make a statement which the person applying knows to be false,
  - (b) with intent to deceive, forge or alter a registration card or certificate referred to in paragraph (a), or
  - (c) with intent to deceive, make, supply or possess any document closely resembling a registration card or certificate required in accordance with these Regulations."

It is a serious criminal offence to knowingly obtain a Safe Pass or CSCS card or equivalent certificate under false pretences, or to forge or alter, possess or supply forged or altered cards for the purposes of deceiving an employer, a PSCS, or anyone else who would have reason to check for authentic Safe Pass and CSCS cards.

# Part 8. Consultation Requirements

### 8.1 Must Contractors Make Consultation Arrangements?

It is the duty of every contractor to ensure consultation with employees or their safety representative (or both) in relation to safety and health requirements, taking account of the need, whenever necessary, for co-ordination between employees or the safety representatives of the different contractors on the construction site.

Under section 13 of the Safety, Health and Welfare at Work Act 2005, each employer is obliged to make arrangements for effective consultation with his or her employees on matters of safety and health. In addition, employees have the right to select and appoint one of themselves as a safety representative to represent them in consultation on safety and health matters with the contractor.

However, consultation does not just cover the employer/employee relationship. Consultation should also be ongoing between contractors, designers, Project Supervisors, clients and others, as relevant, on site. Decisions should not be unilaterally imposed on other parties but due consideration should be given to inputs of those who are affected by decisions made in the context of safety, health and welfare.

#### 8.1.1 What should Consultation Cover?

Section 26 of the Safety, Health and Welfare at Work Act 2005 sets out a range of matters on which employees ought to be consulted. However, those matters should also be considered in the context of the other contractual relationships on site.

#### These include:

- any proposed measures which may substantially affect safety and health;
- the designation of employees to carry out protective and preventive services or emergency duties;
- · contents of the safety statement and risk assessments carried out (including any revisions to them);
- · information on notifiable accidents and dangerous occurrences;
- · the engagement of external safety and health consultants;
- · the planning and organisation of training;
- the planning and introduction of new technologies as they effect particularly the choice of equipment, the working conditions and the working environment for the safety and health of employees.

Changes in design, timescale and other key parameters which affect safety and health should also form the basis of consultation and should not (as previously noted) be unilaterally imposed by the Client or Project Supervisors.

#### 8.1.2 How can Effective Consultation take place?

Consultation arrangements, depending on the size and nature of the project, can have various forms ranging from formal site meetings, to a safety committee with agreed agenda, to informal discussions with the immediate supervisor. Consultation must be balanced for both employees and management. The type of consultation arrangements needed on site will depend on the size and nature of the project and should enable the views of employees working for different contractors to be co-ordinated and taken into account.

On smaller sites, direct, informal contact may be sufficient, whereas on larger sites a formal arrangement of representatives and co-ordination meetings may be necessary. Any employee appointed as a safety representative, or participating in the consultation process, must not be placed at any disadvantage (e.g. in relation to promotion, work experience, choice of shifts, holidays etc).

### 8.1.3 What Arrangements are Needed for Effective Consultation?

In addition to the obligation on contractors to consult their employees, they must also take account of the need for co-ordination of consultation arrangements between the various other contractors on site. The Project Supervisor Construction Stage will need to specify in the Safety and Health Plan the arrangements for consultation between the different contractors. Contractors are obliged to co-operate with the Project Supervisor in ensuring that there is effective consultation between the various contractors and groups of employees on the site.

The PSCS should ascertain the effectiveness of the arrangements made. This can be done simply by requesting feedback from the contractors and their respective employee representatives. If the project is on a large scale with numerous contractors on site, the PSCS should arrange in consultation with the various contractor employee representatives and the Site Safety Representative, structures such as joint safety committee meetings or a rotation of safety representatives attending site safety meetings. No matter what structure is implemented, it is important that consultation arrangements should include balanced participation on the part of both employees and employers.

#### 8.1.4 Pointers for an Effective Consultation Mechanism

- There should be a commitment from site management to provide the necessary financial and staff resources.
- Site management and employees should be encouraged to participate.
- Workers should be encouraged to communicate their views or complaints.
- Sensible recommendations should be implemented without delay.
- Site management should not ignore reasonable recommendations.
- Safety representatives should be adequately trained and informed on safety and health matters.
- Meetings should be held regularly in accordance with agreed procedures.
- · The agenda for meetings should be varied and relevant.
- Attendees at site safety meeting should be prepared to consider new options or approaches to problems.

#### 8.1.5 The Site Safety Representative

Section 25 of the Safety, Health and Welfare at work Act 2005 provides that:

" ... employees may, from time to time, select and appoint from amongst their number at their place of work a representative (in this Act referred to as a "safety representative") or, by agreement with their employer, more than one safety representative, to represent them at the place of work in consultation with their employer on matters related to safety, health and welfare at the place of work."

Regulation 23 of the Construction Regulations 2006 further develops this and introduces the concept of a "Site Safety Representative".

#### 8.1.6 Why a Site Safety Representative?

A perception existed that consultation and safety representation as provided for in the Safety, Health and Welfare at work Act 2005 was never facilitated with any great effect in the construction industry in the past, as a construction site was seen as a temporary workplace, with a rapidly changing environment and with large numbers of workers, very often with different employers.

Hence, the introduction of the requirement in the Construction Regulations 2006 for a Site Safety Representative provides, not only a focal point, but also a duty-holder in relation to facilitation and co-ordination of representation for, and consultation with construction site workers.

### 8.1.7 Who is Responsible for Facilitating the appointment of the Site Safety Representative?

The Project Supervisor Construction Stage has a duty to co-ordinate consultation between the contractors and their respective employees, and a duty to facilitate the appointment of a Site Safety Representative where more than 20 workers are normally employed at any one time on the site at any stage of the project. Schedule 5 to the Construction Regulations 2006 sets out the procedure for the appointment of Site Safety Representatives.

It is important that a Site Safety Representative should represent all workers on a site irrespective of who their direct employer is. The primary duty-holder with regard to the Site Safety Representative is the PSCS. However, sub-contractors and others also have duties as employers in relation to consultation with, and representations from their employees and the duty to co-operate with the PSCS.

Workers can elect the Site Safety Representative at any time after site start-up. The Site Safety Representative should be in place at the earliest possible time. All the workers on a site, irrespective of their direct employer, are entitled to vote.

The PSCS must facilitate the advertising of the role and function of the Site Safety Representative and coordinate with contractors the advising of the role to all workers on a construction site. The site induction or the Tool Box Talk is an opportune moment to advise workers of the Site Safety Representative and his or her role on site.

Once the advising of the role and function of the Site Safety Representative is complete, the Project Supervisor Construction Stage must seek volunteers from the construction site workforce.

#### 8.1.8 Who can be a Site Safety Representative and how is the Representative Selected?

Any worker on the site may volunteer. Should more than one person volunteer, the Project Supervisor Construction Stage should organise an election process. If previously elected under section 25 of the 2005 Act, or under Regulation 7 of the Construction Regulations 2006, an employee may be nominated again for the role. However, it should be noted that Site Safety Representatives must be selected for each project by the workers on that site. A Site Safety Representative moving from a site under completion to a new project is not automatically the Site Safety Representative for the new site.

If, after advertising the role and function of the Site Safety Representative no workers volunteer for the role, the Project Supervisor Construction Stage may provisionally appoint a Site Safety Representative. Should 50 per cent of the workers on the site at a later date organise an election, the outcome of that election denotes the Site Safety Representative and the provisional appointment is ended.

The Project Supervisor Construction Stage must keep available for inspection a record detailing the selection process, in addition to a record of the name of the Site Safety Representative.

There is also a requirement on the Project Supervisor Construction Stage to take steps to inform all persons on a site of the name of the Site Safety Representative following the selection process. Workers arriving on a site subsequent to the selection process must also be advised of the name of the Site Safety Representative. Best practice would be to ensure that the name of the selected Site Safety Representative is included in site inductions as part of the Safety and Health Plan, and to invite the Site Safety Representative to attend the beginning or end of an induction talk to introduce themselves to new employees and outline their role and function on the site.

The Project Supervisor Construction Stage has a number of specific duties to the Site Safety Representative. The Site Safety Representative must be informed when an inspector from the Health and Safety Authority enters the construction site for the purpose of making a tour of inspection, and the Project Supervisor Construction Stage must inform the Site Safety Representative of the time and venue of all site safety meetings and facilitate his or her attendance at such meetings.

The PSCS and any contractor involved in the project must take account of any representations made to him or her by a Site Safety Representative on any matter affecting the safety, health and welfare of any person at work at the construction site.

If a Safety Representative is of the view that there is serious or imminent danger to a person or persons, that risk must be reported immediately to the relevant management party.

Where the Safety Representative is asked by a worker to highlight an unsatisfactory condition or practice, then this can be reported at an agreed time to site management, e.g. before or after a rest period, or at the end of the working day, whichever is sooner. However, within his or her role the Safety Representative should actively encourage workers to report and highlight unsafe conditions and unsafe practices, as all employees have a duty to do so under the Safety, Health and Welfare at Work Act 2005.

#### 8.1.9 What are the functions of the Site Safety Representative?

The Construction Regulations give a range of rights to the Site Safety Representative as follows:

The Right to Information: The Site Safety Representative has a right to access information from the PSCS regarding any safety, health and welfare issues on the construction site. There is the duty on all employers that all information relevant to safety, health and welfare should be advised to all employees (excluding certain information of a confidential nature, e.g., personal or medical information).

The Right to Make Representations: Representations may be made not only to the Project Supervisor Construction Stage, but to any contractor involved in the project. All employees may also raise any issue on safety, health and welfare if they wish.

The Right to Liaise with the Health and Safety Authority at any Time: All employees may speak with a Health and Safety Authority inspector. However, in addition to this, a Site Safety Representative must be advised by the PSCS if a Health and Safety Authority inspector visits the site.

The Right to Carry Out Reasonable Inspections and Investigations: Often inspections are carried out on agreement with the PSCS. The carrying-out of inspections by a Site Safety Representative does not replace the duties on employers or the PSCS. The Site Safety Representative has a right to investigate accidents and dangerous occurrences, but he or she must not interfere or obstruct the fulfilment of a statutory obligation, e.g. the scene of a fatal accident must be preserved until a Health and Safety Authority inspector has carried out an investigation.

It must be remembered by employers and fellow workers alike, that the Site Safety Representative is often a voluntary role and that role is to consult with, and make representations to the relevant management party on safety, health and welfare matters relating to the site.

The objective of such consultation is to:

- prevent accidents and ill health;
- help highlight problems; and
- help identify solutions.

A Site Safety Representative will incur no criminal liability arising from his or her performance of, or failure to perform any functions of a Safety Representative. The Site Safety Representative does not replace the duties of the PSCS or the contractor to manage safety and health on the construction site.

### 8.2 What Protection is afforded the Site Safety Representative?

Training is essential for all workers to ensure a task is carried out in a proper manner. The Safety, Health and Welfare at Work Act 2005 places a duty on all employers to provide training for employees.

The contractor employing the Site Safety Representative must allow reasonable time off work without loss of earnings, for the Site Safety Representative to acquire training that will enable him or her to function effectively.

The contractor and the PSCS should also provide training and information to the Site Safety Representative on the specific hazards and safe systems of work at the site. This allows the Site Safety Representative have a good understanding of the information that he or she has a right to access and provides for effective representation and consultation.

Site Safety Representatives shall not suffer any disadvantage in their employment nor suffer any loss of earnings through discharging their functions.

Where can I get more Information on the Site Safety Representative?: "Guidelines on Safety Consultation and Safety Representatives" is available from the Health and Safety Authority. For information about the election process, best practice in consultation, an operational guidance for construction site safety representation, see "Operational Guidelines for Safety Consultation in the Construction Industry", a guide produced by the Safety Representatives' Facilitation Pilot Project, available from the Construction Industry Federation or the Irish Congress of Trade Unions.

#### 8.2.1 Procedure for Selection of Site Safety Representatives

In the absence of a Site Safety Representative selected by the persons at work on the site, the procedures in Schedule 7 to the Construction Regulations 2006, which is reproduced in Appendix 4 of these guidelines, should be followed.



### Safety, Health and Welfare at Work (Construction) Regulations, 2006

### Approved Form (AF 1)

Regulation 10

### Particulars to be notified by the Client to the Health and Safety Authority before the design process begins

#### NOTE

This form is to be used to notify of any project covered by the Safety, Health and Welfare (Construction) Regulations 2006, which will last longer than 30 days or 500 person days. It can also be used to provide changes in appointments since initial notification of projects.

Any day on which construction work is carried out (including holidays and weekends) should be counted, even if the work on that day is of short duration. A person day is one individual, including supervisors and specialists, carrying out construction work for one normal working shift.

This Notification is to be made by Registered Post to HSA, Metropolitan Building, James Joyce Street, Dublin 1; or as may be directed by the Authority.

Address:  Project Supervisor Design Process and Health & number and e-mail address for the PSDP and Health & PSDP Name:  Address:  Telephone:  E-Mail:  Project Supervisor Construction Stage and Health address, telephone number and e-mail address for the Stage.	A Safety Coordinator for the Design Process.  H&S C. Name:  Address:  Telephone:  E-Mail:  th & Safety Coordinator, if known: Provide name,	
Project Supervisor Design Process and Health & number and e-mail address for the PSDP and Health & PSDP Name:  Address:  Felephone:  E-Mail:  Project Supervisor Construction Stage and Health address, telephone number and e-mail address for the PSDP and Health & PS	Safety Coordinator: Provide name, full address, tel Safety Coordinator for the Design Process.  H&S C. Name: Address:  Telephone: E-Mail:  h & Safety Coordinator, if known: Provide name,	
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Project Supervisor Construction Stage and Healt address, telephone number and e-mail address for the	h & Safety Coordinator, if known: Provide name,	full
Address:	Address:	
Felephone:	Telephone:	
-Mail:	E-Mail:	
Information on Construction Work: Please provide	your details of the following.	
Description of Project:	·	
Exact Address		
of Construction Site:		
Signed:	by or on behalf of the Client	
Position:	Date:	



NOTE:

### Safety, Health and Welfare at Work (Construction) Regulations, 2006 Regulation 22

# Approved Form (AF 2)

### Particulars to be notified by Project Supervisor for the Construction Stage to the Health and Safety Authority before the construction work begins

This form is to be used to notify the Health & Safety Authority of any project covered by the Safety, Health and Welfare at Work (Construction) Regulations 2006, which will last longer than 30 days or 500 person days. It can also be used to provide changes to initial notification of projects.

Any day on which construction work is carried out (including holidays and weekends) should be counted, even if the work on that day is of short duration. A person day is one individual, including supervisors and specialists, carrying out construction work for one normal working shift.

This Notification is to be made by Registered Post to HSA, Metropolitan Building, James Joyce Street, Dublin 1; or as may be directed by the Authority.

The project supervisor for the construction stage shall clearly display on the construction site a copy of this form.

Name:		
Address:		
Telephone:	E-Mail:	
		rdinator: Provide name, full address, telephone
PSDP Name:	ne PSDP and Health & Safety Coo H&S C. Na	
Address:	Address:	Sinc.
Paddi 655.	Addiess.	
Telephone:	Telephone	a:
E-Mail:	E-Mail:	
		Coordinator: Provide name, full address,
		Safety Coordinator for the Construction Stage.
PSCS Name:	H&S C. Na	ame:
Address:	Address:	
Telephone:	Telephone	:
E-Mail:	E-Mail:	
<b>^</b>		
4 Information on Construction V	Vork: Please provide your details	s / estimates for the following.
Description of Project:		
Address of		
Site:		
The planned date for the commencement	ent of the construction work:	
How long the construction work is exp		
The maximum number of people carry	, ,	at any one time.
The number of Contractors expected to		
		8. talanhana number of there colorted to work o
this project (if required continue of		& telephone number of those selected to work of
Name	Address	Telephone and Email
Signed:	by or on b Construction	ehalf of the Project Supervisor for the on Stage

Suggested Documentation for use in Co-ordinating and when Carrying out the Design of a Structure.

- Permanent Works Design Certificate (RF1) which may be used for co-ordination of the design of the Permanent works including specialist designs on a project.
- Temporary Works Design Certificate (RF2) which may be used for co-ordinating the design of the Temporary Works.

**Note:** These certificates are not mandatory under the legislation but are recommendations as to how the designers and the PSDP can share information and for designers to verify their designs. If these are not used, then alternative means must be used by the PSDP to "take account of the general principles of prevention" and to bring about co-ordination of designers on the project and for designers to provide information as is known.

	_		
(to be completed by the Permane	Certificate Reference Number:	ne rour)	
manent Works Designers to Wh	ich This Certificate Applie	es:	
Structural Engineer	Civil Engineer	M&E Engi	neer
Geotechnical Engineer	Traffic Consultant	Landscap	e Architect
Quantity Surveyor	Specialist Designer		
	Other Designer		
		Design o	riteria attached
		Yes	No
y, the design of these parts of the v ign and that we have exercised rea nd diligence with due regard to our Welfare at Work Act, 2005 and unde	works which sonable duties under at the Safety,		Date:
nt of the General Principles of Preve			
PSDP and PSCS as appropriate wit			
	manent Works Designers to What Structural Engineer  Structural Engineer  Geotechnical Engineer  Quantity Surveyor  Quantity Surveyor  at we have to date carried out, and y, the design of these parts of the sign and that we have exercised rear Melfare at Work Act, 2005 and unck fork (Construction) Regulations, 20 and of the General Principles of Prevery File;  PSDP and PSCS as appropriate with quired by the Construction Regulation with the PSDP and PSCS and with or	twe have to date carried out, and will continue Quantity Surveyor    Quantity Surveyor   Specialist Designer	manent Works Designers to Which This Certificate Applies:  Structural Engineer Civil Engineer M&E Engineer  Geotechnical Engineer Traffic Consultant Landscap  Quantity Surveyor Specialist Designer  Other Designer  Other Designer  Signed for & on behalf of the Designer of the works which and that we have exercised reasonable and that we have exercised reasonable and diligence with due regard to our duties under Welfare at Work Act, 2005 and under the Safety, fork (Construction) Regulations, 2006, we:  Int of the General Principles of Prevention and y File;  PSDP and PSCS as appropriate with all relevant puired by the Construction Regulations; and with the PSDP and PSCS and with other

Signed:

for & on behalf of the PSDP:

Date:

# Temporary Works Design Certificate parv (to be completed by the Temporary Works Designer, Permanent Works Designer(s) and the PSDP)

Project:		Certificate Reference Number:		
Element of Temporary Works to which this certificate applies:				
Detail design codes adopted or complied with for these temporary works:				
Reference numbers for calculations; completed & checked:				
Drawings Numbers; completed & checked:				
Provide the assumed construction sequence required by the Temp Works Design:				
Requirements for temporary stability: propping, bearing, bracing, loading:			Fully detailed on drawings Additional Information att	
parts of the works which diligence with due regated Health and Welfare at 1 1 have taken account 2 have provided the	hat we have to date carried out the we are appointed to design a and to our duties under the Safe Work (Construction) Regulation unt of the General Principles of e PSDP and PSCS as appropria with the PSDP and PSCS and v	and that we have exercise ety, Health and Welfare at ns, 2006, we: Prevention and any existing te with all relevant inform	d reasonable professional s Work Act, 2005 and under ng Safety File; ation as required by the Re	kill, care and the Safety,
Signed:		for & on behalf of the Ter	mporary Works Designer:	Date:
satisfied that our perm	hat we have communicated ou anent works design can be con y, Health and Welfare at Work	structed to be safe and wi		
Signed:		for & on behalf of the Per	manent Works Designer:	Date:
n respect of the taking	hat we have coordinated the a jinto account the General Print Welfare at Work (Construction	ciples of Prevention and wi		
	emporary Works may proce greed by the Contractor, Te			
Signed:		for & on behalf of the PS(		Date:

### Suggested Contents of Safety and Health Plan And Life Cycle of the Safety and Health Plan and the Safety File

### (a) The Preliminary Safety and Health Plan

- 1. Description of Project
  - project description and programme details;
  - details of client, designers, Project Supervisor Design Process and other consultants;
  - extent and location of existing records and plans;
  - arrangements for communicating with Designers, PSCS and others as appropriate.
- 2. Client's Considerations and Management Requirements
  - structure and organisation;
  - safety objectives for the project and the arrangements for monitoring and review;
  - permits and authorisation requirements;
  - emergency procedures;
  - site rules and other restrictions on contractors, suppliers and others, e.g. access arrangements to those parts of the site which continue to be used by the client;
  - activities on or adjacent to the site during the works;
  - · arrangements for liaison between parties;
  - security arrangements.

#### 3. Environmental Restrictions and Existing On-site Risks

- a) Safety hazards, including:
  - boundaries and access, including temporary access;
  - adjacent land uses;
  - existing storage of hazardous materials;
  - location of existing services water, electricity, gas, etc;
  - ground conditions;
  - existing structures stability, or fragile materials;
- b) Health hazards, including:
  - asbestos, including results of surveys;
  - existing storage of hazardous materials;
  - contaminated land, including results of surveys;
  - existing structures hazardous materials;
  - health risks arising from client's activities.
- 4. Significant design and construction hazards
  - design assumptions and control measures;
  - arrangements for co-ordination of ongoing design work and handling design changes;
  - information on significant safety and health risks identified during design;
  - materials requiring particular precautions.

### (b) The Safety and Health Plan for the construction stage.

- 1. Description of Project
  - project description and programme details;
  - details of client, Project Supervisor Design Process and Project Supervisor Construction Stage, designers, main contractor and other consultants;
  - extent and location of existing records and plans;
  - arrangements for communicating with Contractors, PSDP and others as appropriate.

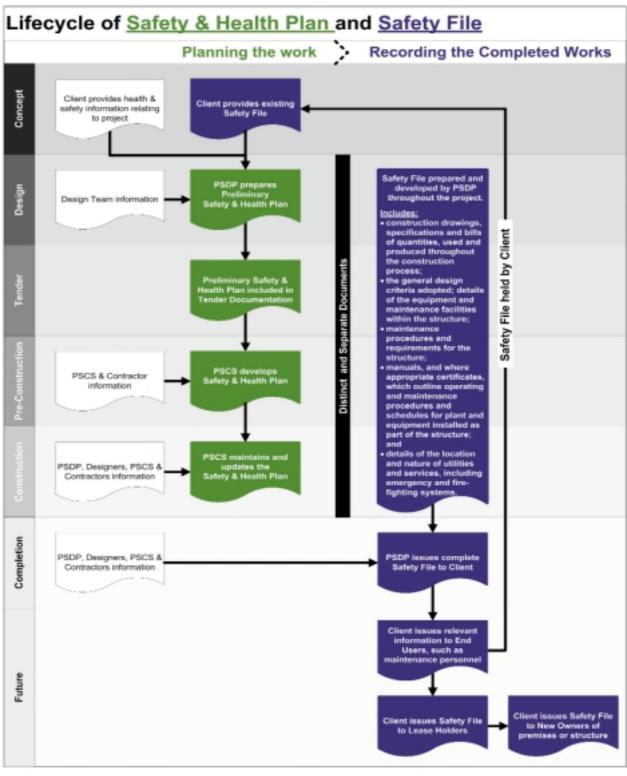
- 2. Communication and Management of the Work
  - management structure and responsibilities;
  - safety and health goals for the project and arrangements for monitoring and review of safety and health performance;
  - arrangements for:
    - > regular liaison between parties on site;
    - consultation with the workforce;
    - > the exchange of design information between the Client, Designers, Project Supervisor for the Design Process, Project Supervisor Construction Stage and Contractors on site;
    - > handling design changes during the project;
    - > the selection and control of contractors;
    - > the exchange of safety and health information between contractors;
    - > security, site induction, and on-site training;
    - > welfare facilities and first aid;
    - > the production and approval of risk assessments and method statements;
    - > the reporting and investigation of accidents and other incidents (including near misses);
- d) site rules;
- e) fire and emergency procedures

### 3. Arrangements for Controlling Significant Site Risks

- a) safety risks
  - · services, including temporary electrical installations;
  - preventing falls;
  - work with or near fragile materials;
  - control of lifting operations;
  - dealing with services (water, electricity and gas);
  - the maintenance of plant and equipment;
  - poor ground conditions;
  - traffic routes and segregation of vehicles and pedestrians;
  - storage of hazardous materials;
  - dealing with existing unstable structures;
  - accommodating adjacent land use;
  - other significant safety risks.

#### b) health risks:

- removal of asbestos;
- · dealing with contaminated land;
- manual handling;
- use of hazardous substances;
- reducing noise and vibration; and
- other significant health risks.



### Summary:



### Schedule 5 to the Construction Regulations 2006

### **Procedure for Selection of Safety Representatives**

In the absence of a Site Safety Representative selected by the persons at work on the site, the following procedures shall apply.

The selection of a Site Safety Representative should proceed as follows:

- 1. If a Site Safety Representative is elected by the workers on the site at any time after commencement of activities on the site this person shall be recognised as such by the Project Supervisor Construction Stage and particulars shall be noted in writing by the Project Supervisor Construction Stage.
- 2. If a safety representative has previously been selected under section 13 of the Principal Act by the employees of any of the contractors on the construction site the views of all persons at work on the site at the time must be taken into account when confirming that person as Site Safety Representative.
- 3. If, at the time the number of persons at work on the construction site normally exceeds 20 and there is no Site Safety Representative the Project Supervisor Construction Stage shall invite all persons working on the site at that time to elect a Site Safety Representative from amongst their number. If those working on the site are unwilling to organise a selection process themselves and request the Project Supervisor Construction Stage to do so he or she shall organise the election.
- 4. If a Site Safety Representative is not selected under paragraph (3) the Project Supervisor Construction Stage shall invite persons working on the construction site or their representatives to nominate persons willing to undertake the role. If more than one name is put forward the Project Supervisor Construction Stage shall determine which candidate has the most support from all persons employed on the site. The person who has the most support shall be deemed selected.
- 5. If no Site Safety Representative has been selected under paragraphs (1) to (4), the Project Supervisor Construction Stage shall nominate a provisional Site Safety Representative. If subsequently a Site Safety Representative is elected by a process involving more than 50 per cent of the persons working on the site at a particular time then that person shall be deemed to be the Site Safety Representative.
- 6. The Project Supervisor Construction Stage shall take steps to inform all persons who are at work on the site at the time of the selection and subsequently of the name of the Site Safety Representative. The Project Supervisor Construction Stage must keep available for inspection by an inspector a record of the name of the Site Safety Representative and details of the selection process.

### Schedule 6 to the Construction Regulations 2006

List of Vehicles Requiring Auxiliary Devices and Visual Aids.

Machine type	Reversing and visual aids required
Off-road dump trucks (trailer to rear of driver), payload greater than 7 tonnes	Reversing alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision from the driver's seat of all points more than 1metre high and 1 metre from the machine at each side and at rear of driver.
Dumpers (front tip), no cab	Reversing alarm and flashing beacon.
Dumpers (front tip), with cab	Convex mirrors, reversing alarm, and flashing beacon.
Wheel loaders (loading shovels), including skid steer loaders.	Reversing alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision from the driver's seat of all points more than 1 metre high and 1 metre from the machine at each side and at rear of driver.
Backhoe loaders	Convex mirrors, reversing alarm, and flashing beacon.
All 360° excavators	Movement alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision from the driver's seat (without slewing) at all points more than 1 metre high and 1 metre from the machine.
Scrapers	Reversing alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision from the driver's seat of all points more than 1 metre high and 1 metre from the machine at each side and at rear of driver.
All tracked type tractors (bulldozers)	Reversing alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision at all points more than 1 metre high and 1 metre from the machine at each side and at rear of driver.
Graders	CCTV, convex mirrors, reversing alarm and flashing beacon.
Telescopic handlers	Reversing alarm and flashing beacon with CCTV or convex mirrors or a combination of both to allow vision from the driver's seat of all points more than 1 metre high and 1 metre from the machine at each side and at rear of driver.
Compactors/rollers without cab and seat to rear	Reversing alarm and flashing beacon.
Compactors/rollers with cab and seat to rear	Convex mirrors, reversing alarm and flashing beacon.
All compactors/rollers	Reversing alarm and flashing beacon with CCTV or convex mirrors, or a combination of both, to allow vision at all points more than 1 metre high and 1 metre from the machine at each side and at rear of driver.
Road planer	Convex mirrors, reversing alarm and flashing beacon.
Road pavers	Convex mirrors, reversing alarm and flashing beacon.

### Summary of Changes in Regulations 30 to 105 of the Construction Regulations 2006 compared to the Construction Regulations 2001 and 2003

This chapter will summarise the main differences between the Safety, Health and Welfare at Work (Construction) Regulations 2006 and the Safety, Health and Welfare at Work (Construction) Regulations 2001 from Regulation 10 to Regulation 56.

### Explosives (Regulations 73 to 78 of 2006)

Part 8 of the Regulations contain new requirements in relation to the use of explosives on Construction sites.

- Regulation 73 relates to the Application of Part 8.
- Regulation 74 details the duties of the contractor.
- Regulation 75 details the supervision of shotfiring operations and trainee shotfirers and records of appointment.
- Regulation 76 details the duties of Explosives Supervisor and shotfirer.
- Regulation 77 details the requirement in relation to Misfires.
- Regulation 78 details prohibited activities.

#### Construction Work on or adjacent to Water (Regulation 56 of 2006)

Regulation 86 on the Prevention of Drowning now requires the provision and use of *personal flotation devices* (conforming to EN or equivalent standards) for construction work on or adjacent to water into which a person at work is liable to fall with risk of drowning. The personal flotation devices should be properly maintained and be inspected before each use and given a thorough examination every 12 months (with the results of the inspections and examinations made a prescribed form).

### Transport: General (Regulation 87 of 2006)

Regulation 87(1)(e) provides that in circumstances where the operator's visibility is restricted, "auxiliary devices shall be installed to improve visibility (as listed in Schedule 6) unless a risk assessment shows that this is not required" (in the 2001 Regulations an efficient warning device had to be fitted. It requires these visibility aids to be fitted on all new vehicles before 6 May 2008 and on all vehicles on the list before 6 May 2008 (unless there are particular circumstances with regard to the work that requires these devices to be fitted before these dates).

Regulation 87(2) addresses the organisation and control of traffic and pedestrian routes including, where appropriate, the provision of a traffic and pedestrian management plan.

### **Demolition (Regulation 93 of 2006)**

The wording of the regulation is changed in that work can only take place under the supervision of a competent person.

#### Roads etc (Regulation 97 of 2006)

Part 8 of the Regulations contains new requirements for works on roads, footpaths and cycle tracks. Where any part of a road, footpath or cycle track is opened, excavated, broken up or obstructed by plant or equipment or by materials for the purpose of performing construction work, the contractor must ensure that the works are:

- adequately guarded and that adequate lighting is provided, traffic signs are placed and maintained, and where necessary operated as reasonably required for the safe guidance or direction of persons, having regard, in particular, to the needs of people with disabilities;
- supervised by a competent person who has been issued with a valid construction skills registration card, i.e. signing, lighting and guarding on roads.

In addition when the works are in progress there is on site, at all times, at least one person who has been issued with a valid construction skills registration card, i.e. signing, lighting and guarding on roads.

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