

# GUIDELINES OF OCCUPATIONAL SAFETY AND HEALTH IN CONSTRUCTION INDUSTRY (MANAGEMENT) 201X



DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH  
MINISTRY OF HUMAN RESOURCES

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## 1. Introduction

### 1.1 About this book and who this book is for

1 The Guidelines cover the management of safety, health and welfare when carrying out construction projects. This guidance is for people with legal duties under sections 15 and 17 of the Occupational Safety and Health Act (OSHA) 1994. It explains what they must or should do to comply with the law. Any actions taken should always be proportionate to the risks in the construction project.

2 Responsibility for occupational safety and health (OSH) in construction are shared among all stakeholders in the industry's supply chain. Stakeholders such as clients, designers and contractors must work together to design OSH hazards out of the construction industry's processes and products. By working together, identify and eliminate or reduce, as far as is *reasonably practicable*<sup>1</sup>, all foreseeable design risks to safety or health of any person<sup>2</sup>.

3 Under OSHA, organisations or individuals can be one or more dutyholder for a project or workplace. Stakeholder or dutyholder must perform his or her duties and cooperate with other dutyholders to perform their duties, and promote safe execution of construction and maintenance works so that buildings and *structures*<sup>3</sup> can be a safe workplaces.

### 1.2 Key elements to securing construction safety and health

4 The Guidelines are based on these key elements:

- (a) managing the risks by applying the **general principles of prevention**;
- (b) **appointing** the right people and organisations at the right time;
- (c) making sure everyone has the **information, instruction, training and supervision** they need to carry out their jobs in a way that secures health and safety;
- (d) dutyholders **cooperating and communicating** with each other and **coordinating** their work; and
- (e) **consulting workers and engaging** with them to promote and develop effective measures to secure health, safety and welfare.

#### **General principles of prevention**

5 These set out the principles dutyholders should use in their approach to identifying the measures they should take to control the risks to safety and health in a particular project. The general principles of prevention are set out in full in Appendix 1, but in summary they are to:

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<sup>1</sup>Reasonably practicable means that the degree of risk in a particular situation can be balanced against the time, trouble, cost and physical difficulty of taking measures to avoid the risk. An action is considered to be practicable when it is capable of being done. To decide if an action is reasonable, one has to consider: (a) the severity of any injury or harm to health that may occur; (b) the degree of risk (or likelihood) of that injury or harm occurring; (c) how much is known about the hazard and ways of eliminating, reducing or controlling it; and (d) the availability, suitability and cost of the safeguards.

<sup>2</sup>Person is defined as anyone: (a) carrying out or liable to be affected by construction work for the structure; or (b) working in a completed building or structure as a workplace including an individual who maintains or cleans the structure, or anything in or on the structure.

<sup>3</sup>Structures are defined as any permanent or temporary structures, which also include any part of the structure and any product, or mechanical or electrical system intended for the structure.

- (a) avoid risks where possible;
- (b) evaluate those risks that cannot be avoided; and
- (c) put in place proportionate measures that control them at source.

This Guidelines requires designers, principal designers, principal contractors and contractors to take account of the principles in carrying out their duties.

### ***Appointing the right organisations and people at the right time***

6 Appointing the right organisations and individuals to complete a particular project is fundamental to its success, including safety and health performance.

#### ***Appointing designers and contractors***

7 Anyone responsible for appointing designers (including principal designers) or contractors (including principal contractors) to work on a project must ensure that those appointed have the skills, knowledge and experience to carry out the work in a way that secures safety and health. If those appointed are an organisation, they must also have the appropriate organisational capability. Those making the appointments must establish that those they appoint have these qualities **before** appointing them. Similarly, any designers or contractors seeking appointment as individuals must ensure they have the necessary skills, knowledge and experience.

8 Dutyholders should be appointed at the right time. For example, clients must appoint principal designers and principal contractors as soon as practicable and **before** the start of the construction phase, so they have enough time to carry out their duties to plan and manage the pre-construction and construction phases respectively. See paragraphs 26–31 and 38–44 for guidance on making these appointments and their timing.

#### ***Contractors appointing anyone for work on a construction site***

9 When contractors appoint anyone to carry out work on a construction site, they must make sure that those they appoint have, or are in the process of gaining, the right skills, knowledge, training and experience (see paragraphs 132–138). Not everyone will have these qualities and, if they do not, appointments should be made on the basis that they are capable of gaining them.

### ***Supervision, instructions and information***

10 The level of supervision, instructions and information required will depend on the risks involved in the project and the level of skills, knowledge, training and experience of the workforce. Contractors (including principal contractors) must make sure supervision is effective and suitable site inductions are provided along with other information – such as the procedures to be followed in the event of serious and imminent danger to safety and health (see paragraphs 139–143).

### ***Cooperating, communicating and coordinating***

11 Dutyholders must cooperate with each other and coordinate their work to ensure safety and health. They must also communicate with each other to make sure everyone understands the risks and the measures to control those risks. For example, through regular dialogue between the client, the principal designer and principal contractor to ensure they have the time and resources to plan, manage, monitor and coordinate the pre-construction and construction phases (see paragraphs 45–46).

### **Consulting and engaging with workers**

12 Workplaces where workers are consulted and engaged in decisions about safety and health measures are safer and healthier. Consultation about safety and health is two way. It involves giving information to workers, listening to them and taking account of what they say before decisions are made by the dutyholder. For example, hold meetings before work starts to discuss the work planned for the day, identify risks and agree appropriate control measures. Involving workers helps those responsible for safety and health to manage it in a practical way by:

- (a) helping spot workplace risks and knowing what to do about them;
- (b) making sure safety and health controls are appropriate;
- (c) increasing the level of commitment to working in a safe and healthy way.

13 Workers must be consulted in good time. The Occupational Safety and Health (Safety and Health Committee) Regulations 1996 and the Factories and Machinery (Building Operations and Works of Engineering Construction) (Safety) Regulations 1986 require employers to consult their workforce and sub-contractors about safety and health, either direct with workers or through elected representatives.

### **1.3 Application**

14 The Guidelines is not intended for *a project*<sup>4</sup> undertaken by a *domestic client*<sup>5</sup>. Despite that, DOSH encourages domestic client, designer and contractor appointed by the domestic client to apply this Guidelines in their project. The restricted applicability of the Guidelines should not be construed as prohibiting or discouraging the use of this Guidelines to domestic construction projects.

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<sup>4</sup>Project means a project which includes or is intended to include construction works and include all planning, design, management or other works involved in a project until the end of the construction phase;

<sup>5</sup>Domestic client means client for whom a construction project is carried out which is not done in connection with a business.

## 2. Clients

### 2.1 Who are Clients

15 Clients are persons for whom or on whose behalf a construction project is carried out in connection with a business, whether the business operates for profit or not. This includes clients based overseas who commission construction projects in Malaysia. Clients can be individuals or organisations, including local authority, state government or federal government. Clients also include corporations, limited companies, partnerships and the *management corporation*<sup>6</sup> of the subdivided building undertaking modification projects on existing building.

16 Homeowners or domestic clients who engage contractors to build their homes or undertake project to build or rebuild houses for personal dwelling not intended for use as a business are not intended to be covered under this Guidelines.

17 Clients are at the top of the construction value chain and have the greatest influence on the project. Regardless of the size of the project, the client has contractual control, appoints designers and contractors, and determines the money, time and other resources available. This Guidelines makes the client accountable for the impact their decisions and approach have on safety, health and welfare on the project.

18 In any project there may be more than one client, but all the possible clients should agree that only one of them should be responsible for carrying out the requirements of the Guidelines.

19 In some circumstances, it may not be clear who the client or clients are. Any uncertainty should be resolved as early as possible by considering who:

- (a) ultimately decides what is to be constructed, where, when and by whom;
- (b) commissions the design and construction works (the employer in contract terminology);
- (c) initiates the work;
- (d) is at the head of the procurement chain; and
- (e) appoints contractors (including the principal contractors) and designers (including the principal designers).

20 Those clients who have not been identified as the client for the purposes of the Guidelines will still have duties. These are to:

- (a) provide any information in their possession that may be relevant to help pull together the pre-construction information; and
- (b) co-operate with anyone involved in the project.

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<sup>6</sup>Management corporation, in relation to any subdivided building refers to any corporation established under sections 39, 64 or 64A, Strata Titles Act 1985 [Act 318]



## 2.2 What must a client do?

### ***Making suitable arrangements for managing a project***

21 Most clients, particularly those who only occasionally commission construction work, would not be experts in the construction process. For this reason, they are not required to take an active role in managing the work. However, the client is required to make *suitable* arrangements for managing the project so that safety, health and welfare is secured.

22 To be *suitable*, the arrangements should focus on the needs of the particular project and be proportionate to the size of the project and risks involved in the work. Arrangements should include:

- (a) assembling the project team – appointing designers (including a principal designer) and contractors (including a principal contractor). See paragraphs 26–31 for more guidance;
- (b) ensuring the roles, functions and responsibilities of the project team are clear;
- (c) ensuring sufficient time, budget and resources are allocated for each stage of the project – from concept to completion;
- (d) ensuring effective mechanisms are in place for members of the project team to communicate and cooperate with each other and coordinate their activities;
- (e) how the client will take reasonable steps to ensure that the principal designer and principal contractor comply with their separate duties. This could take place at the project progress meetings or via written updates;
- (f) setting out the means to ensure that the safety and health performance of designers and contractors is maintained throughout; and
- (g) ensuring that workers are provided with suitable welfare facilities for the duration of construction work.

23 Clients should take ownership of these arrangements and ensure they communicate them clearly to other duty holders. Clients could prepare a clear '*client's brief*' as a way of setting out the arrangements. The client brief normally:

- (a) sets out the main function and operational requirements of the finished project;
- (b) outlines how the project is expected to be managed including its safety and health risks;
- (c) sets a realistic timeframe and budget; and
- (d) covers other relevant matters, such as establishing design direction and a single points of contact in the client's organisation.

24 Where the range and nature of risks involved in the works warrants it, the management arrangements should also include;

- (a) the expected standard of the safety and health, including safe working practices, and the means by which these standards will be maintained throughout;
- (b) what is expected from the design team in terms of the steps they should reasonably take to ensure the designs help manage foreseeable risks during the construction phase and when maintaining and using the building once it is built; and
- (c) the arrangements for commissioning the new building and a well-planned handover procedure to the new user.

25 If a client needs help in making these arrangements, the principal designer should be in a position to help with this. Clients could also draw on the advice of a safety and health officer if they are required to appoint such a person under the Occupational Safety and Health (Safety and Health Officer) Order 1997.

### ***Assembling the project team***

26 The managements arrangements must cover what clients will do to ensure that the people and organisation they appoint have the skills, knowledge, experience and (if an organisation) the organisational capability to manage safety and health risks (see paragraphs 38–44 for further guidance.

27 The extent of the checks a client must make into the capability of dutyholders they appoint will depend on the complexity of the project and the range and nature of the risks involved. *Refer to Appendix 1 Example of OSH Capabilities Questionnaire in the Guideline on Contract Management 2015.* See paragraphs 38–0 for further guidance on the help available to clients in selecting the right dutyholder.

### ***Appointing principal designers and principal contractors***

28 The principal designers should be appointed as early as possible in the design process, if practicable at the concept stage. Appointing the principal designer early will provide the client with help in matters such as pulling together the pre-construction information (see paragraphs 33–34) and giving the principal designer enough time to carry out their duties. The duration of the principal designer's appointment should take into account any design work which may continue into the construction phase or any issue that may arise during construction involving the need to make suitable modifications to the designs. For projects involving early works by a concept architect or project management company where a design and build contractor or novated designer is subsequently involved, it may be appropriate for the initial principal designer appointment to be ended and a new principal designer appointed.

29 The principal contractor should be appointed early enough in the pre-construction phase to help client meet their duty to ensure a construction phase plan is drawn up before the construction phase starts. This also gives the principal contractor time to carry out their duties, such as preparing the construction phase plan and liaising with the principal designer in sharing any relevant information for safety and health.

30 The principal designer should be in place for as long as there is a need for their role to be performed. But where a principal designer's appointment finishes before the end of the project, the client should ensure that the principal contractor is fully briefed on matters arising from designs relevant to any subsequent construction work. The client should also make sure that the principal designer passes the safety and health file to the principal contractor so it can be revised during the remainder of the project if necessary.

31 If a client fails to appoint either a principal designer or principal contractor, the client must carry out their duties.

### ***Maintaining and reviewing the management arrangements***

32 The client must maintain and review their arrangements to ensure they remain relevant throughout the life of the project. Some projects do not go smoothly and clients may experience difficulties and delays as they progress. Examples of actions the clients can take to maintain and review their arrangements are:

- (a) establishing key milestones so they can assess the progress of the project and determine whether safety and health standards are being met;
- (b) where necessary, seeking advice (see paragraph 25). On larger projects, the clients may value an independent review of the standards; and
- (c) ensuring arrangements for handing over the building to a new user are sufficient to protect anyone (including members of the public) who may be affected by risks arising from any ongoing construction work, for example snagging work.

### ***Providing pre-construction information***

33 Pre-construction information is information already in the client's possession (such as an existing safety and health file, an asbestos survey, structural drawings, utility and services plans, soil investigation reports, information on design risks, etc.) or which is reasonable to obtain through sensible enquiry. The information must be relevant to the project, have an appropriate level of detail and be proportionate to the nature of the risks.

34 The client has the main duty for providing pre-construction information. This must be provided as soon as practicable to each designer (including the principal designer) and contractor (including the principal contractor) who is bidding for work on the project or has already been appointed. For projects involving more than one contractor, the client should expect the principal designer to help bring the pre-construction information together and provide it to the designers and contractors involved. Sub-section 6.1 gives further guidance on the requirements relating to pre-construction information. Appendix 2 shows how pre-construction information relates to and influences other types of information during a construction project involving more than one contractor.

### ***Ensuring preparation of the construction phase plan***

35 The client must ensure that a construction phase plan for the project is prepared before the construction phase begins. The plan outlines the safety and health arrangements, site rules and specific measures concerning any work involving the particular risks listed in Appendix 3. For single-contractor projects, the contractor must ensure the plan is prepared. For projects involving more than one contractor, it is the principal contractor's duty. See sub-section 6.2 for further guidance on the requirements relating to construction phase plans and Appendix 2 for how a construction phase plan relates to and influences other types of information during a construction project involving more than one contractor.

### ***Ensuring preparation of the safety and health file***

36 **A safety and health file is only required for projects involving more than one contractor.** The client must ensure that the principal designer prepares a safety and health file for their project. Its purpose is to ensure that, at the end of the project, the client has information that anyone carrying out subsequent construction work on the building will need to know about in order to be able to plan and carry out the work safely and without risks to health.

37 To ensure that an appropriate safety and health file is produced at the end of the project, the client must:

- (a) provide the principal designer with any existing file produced as part of an earlier project so the information it contains can be used to plan the pre-construction phase of the current project;
- (b) ensure the principal designer prepares a new file (or revises any existing one);
- (c) ensure the principal designer reviews and revises the file regularly and passes the completed file back at the end of the project;
- (d) ensure the file is handed to the principal contractor if the principal designer's appointment finishes before the end of the project;
- (e) ensure the file is kept available for anyone who needs it to comply with relevant legal requirements; and
- (f) pass the file to whoever takes over the building and takes on the client duties if the client decides to dispose of their interest in it.

Sub-section 6.3 gives further guidance on the requirements relating to the safety and health file. Appendix 2 shows how the safety and health file relates to and influences other types of information during a construction project involving more than one contractor.

### 3 Appointment of designers and contractors

#### 3.1 Appointing designers and contractors

38 Anyone appointing a designer or contractor to work on a project must take reasonable steps to satisfy themselves that those who will carry out the work have the skills, knowledge, experience, and, where they are an organisation, the organisational capability to carry out the work in a way that secures safety and health. Reasonable steps will depend on the complexity of the project and the range and nature of the risks involved.

39 Organisational capability means the policies and systems an organisation has in place to set acceptable safety and health standards which comply with the law, and the resources and people to ensure the standards are delivered.

40 When appointing a designer or a contractor, sensible and proportionate enquiries should be made about their organisational capability to carry out the work. Only enquiries for information that will address the anticipated risks and capability of the supplier should be made – excessive or duplicated paperwork should be avoided because it can distract attention from the practical management of risks. Those making appointments will find the standard safety and health questions in Appendix 1 *Example of OSH Capabilities Questionnaire* in the Guideline on Contract Management 2015 or PAS 91:2013 (Publicly Available Specification) *Construction related procurement. Prequalification questionnaires* a useful aid. Using these questions is one way of helping to assess organisational capability.

41 As well as carrying out pre-qualification checks on organisations, those responsible for making appointments should also check that the designer or contractor has enough experience and a good record in managing the risks involved in projects. These checks should ideally be carried out at the final stage after pre-qualification checks have been completed and before appointments are made.

42 When considering the requirements for designers and other construction professionals, due weight should also be given to membership of an established professional institution or body. For example, do these bodies have arrangements in place which provide some reassurance that safety and health is part of the route to membership of their profession? However, questions should also be asked of individuals to ensure that they have sufficient skills, knowledge, and experience to carry out the work involved, and that they keep those capabilities up to date.

#### 3.2 Designers and contractors seeking appointment

43 Designers and contractors (including individuals and sole traders) must be able to demonstrate they have the safety and health skills, knowledge and experience to carry out the work for which they are seeking appointment. This is the case for individuals working for larger organisations or for themselves – in particular, self-employed designers.

44 Any business or individual is recommended to use the standard safety and health questions in Appendix 1 *Example of OSH Capabilities Questionnaire* in the Guideline on Contract Management 2015 to assess their own capability and supply relevant documentation to a client in support of a bid for work. The standard safety and health pre-

qualification questions in PAS 91 may also be helpful in carrying out a self-assessment (see paragraph 40).

### 3.3 Cooperating with each other

45 Everyone with duties under this Guidelines must cooperate with others involved with the project or any project on an adjoining site. This means working with each other to ensure safety and health for all concerned. This should involve communicating with others and understanding what they are doing and in what sequence, for example, by holding regular coordination and progress meetings.

46 For lower-risk projects involving more than one contractor, a low-key approach will be sufficient. In higher risk projects, a more rigorous approach to cooperation, coordination and planning will be needed. There must also be effective communications between different organisations where they work in close proximity on the same site or on adjoining sites, for example, daily updates to make sure there is a common understanding of the work being planned. In all cases, action taken should be in proportion to the risks the construction work activity presents.

### 3.4 Reporting dangerous conditions

47 Everyone involved in a project (including workers) has a duty to report instances where they or others are working in a way that puts them or anyone else in danger. Any instances must be reported to the person in control of the work. The person in control should encourage workers to stop work and report dangerous conditions when they see them.

### 3.5 Providing clear information or instructions

48 Anyone with a duty under this Guidelines to provide safety and health information or instructions to anyone else must ensure that it is easy to understand. **Information** about hazards is essential to all project workers and managers to make sure they understand the risks involved with the work. **Instructions** are those agreed actions that must be followed to prevent or minimise those risks.

49 Any information or instruction provided should be in simple, clear Malay (and/ or other languages where appropriate). It should also be set out in a logical order and have illustrations where appropriate. The use of photographs or diagrams in written communication can be very helpful. The amount of detail provided should be proportionate to the scale and complexity of the project, the risks and the nature and purpose of the messages. Only information that is necessary to help prevent harm should be provided – unnecessary information can prevent the clear communication of key messages. Examples of types of information include the:

- (a) pre-construction information the client is required to provide to designers and contractors;
- (b) safety and health information about the design that designers are required to provide to other dutyholders;
- (c) information the principal designer must provide to enable preparation of the construction phase plan;
- (d) site rules that are part of the construction phase plan; and

- (e) information that principal contractors must provide to workers (or workers' representatives).

50 Information or instructions must be provided in good time – before the work begins, so that the recipients can understand and take account of it in carrying out their duties. Wherever possible, it should be made available directly to the people carrying out the work. Where this is not possible, dutyholders and workers need to know what information is available and where it can be found.

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## 4 Designers

### 4.1 Who are Designers

51 A designer is an organisation or individual, who in the course or furtherance of a business:

- (a) prepares or modifies a design for a construction project (including the design of temporary works); or
- (b) arranges for, or instructs someone else under their control to do so,

relating to a structure, or to a product or mechanical or electrical system intended for a particular structure, and a person is deemed to prepare a design where a design is prepared by a person under their control.

52 The term 'design' includes drawings, design details, specifications, bills of quantity and calculations prepared for the purpose of a design. Designers include architects, architectural technologists, consulting engineers, quantity surveyors, interior designers, temporary work engineers, chartered surveyors, technicians or anyone who specifies or alters a design. This would include Professional Engineers, engineers, architects, and even contractors or clients if they prepare a design plan for permanent or temporary structures. They can include others if they carry out design work, such as principal contractors, and specialist contractors, for example an engineering contractor providing design, procurement and construction management services. Where clients become actively involved in designing in relation to their project, they may also be considered to be designers.

53 Local authority or government officials may give advice and instruction on designs meeting statutory requirements (for example the Uniform Building By-Law), but this does not make them designers. A designer may have no choice but to comply with these requirements, which are a 'design constraint'. However, if statutory bodies ask for particular features to be included or excluded which go beyond what the law requires (for example, stipulating the absence of edge protection on flat roofs if there is no basis in planning law or policies to do so), they may become designers under this Guidelines and must comply with its requirements.

54 The person who selects products for use in construction is a designer and must take account of safety and health issues arising from their use. If a product is purpose-built, the person who prepares the specification is a designer and so are manufacturers, if they develop a detailed design.

### 4.2 Why is a designer important?

55 A designer has a strong influence during the concept and feasibility stage of a project. The earliest decisions can fundamentally affect the safety and health of those who will construct, maintain, repair, clean, refurbish and eventually demolish a building. The safety and health of those who use a building as a workplace may also be affected. Decisions such as selecting materials that are lighter to handle or windows that can be cleaned from the inside can avoid or reduce the risks involved in constructing the building and maintaining it after construction. Although it is understood that residual risks may well



remain, decisions such as these have an important influence on the overall safety and health performance of the project and the use and maintenance of the building once it is built.

56 **A designer should address safety and health issues from the very start.** Where issues are not addressed early on, projects can be delayed and it can become significantly harder for contractors to devise safe ways of working once they are on site. The client may also be forced to make costly late changes, so the building can be used and maintained safely once it is built.

#### 4.3 When do a designer's duties apply?

57 The designer's duties apply as soon as designs which may be used in construction work in Malaysia are started. This includes concept design, competitions, bids for grants, modification of existing designs and relevant work carried out as part of feasibility studies. It does not matter whether planning permission or funds have been secured, or the client is a domestic client.

58 If a design is prepared or modified outside Malaysia, the designer duties apply to the person or organisation who commissions it if they are established in Malaysia, or if not, the client (but not a domestic client).

#### 4.4 What must a designer do?

##### ***Making clients aware of their duties***

59 A designer must not start any design work unless they are satisfied the client is aware of the duties clients have under this Guidelines. This duty can be fulfilled as part of routine business, for example, in early meetings or liaison with the client to discuss the project. A designer should have a sufficient knowledge of client duties to give sufficient advice about the project. The level of advice will depend on the knowledge and experience of the client and the complexities of the project.

60 On projects involving more than one contractor, the task of informing the client of their duties should normally fall to the principal designer. Any other designers appointed can seek confirmation from the principal designer that the client has been made aware of their duties.

##### ***Preparing or modifying designs***

61 When preparing or modifying designs, a designer must take account of the general principles of prevention, and the pre-construction information provided to them, with the aim, as far as reasonably practicable, of **eliminating** foreseeable risks. Where this is not possible they must take reasonably practicable steps to **reduce** the risks or **control** them through the design process, and provide information about the remaining risks to other dutyholders. See paragraphs 62–70 for further guidance.

##### ***Taking account of the general principles of prevention in design work***

62 The general principles of prevention are set out in Appendix 1 and provide a framework within which designers must consider their designs and any potential risks which may affect:

- (a) workers or anyone else (for example, members of the public) who may be affected during construction;
- (b) those who may maintain or clean the building once it is built; or
- (c) those who use the building as a workplace.

Designs prepared for places of work also need to comply with the Factory and Machinery (Safety, Health and Welfare) Regulations 1970, taking account of factors such as lighting and the layout of traffic routes.

63 Safety and health risks need to be considered alongside other factors that influence the design, such as cost, fitness for purpose, aesthetics and environmental impact. Working with contractors (including principal contractors) involved in the project can help identify the potential risks and ways they may be controlled.

64 Once the risks have been considered, the level of detail in the information provided to those who need it should be proportionate to the risks remaining. Insignificant risks can usually be ignored, as can those arising from routine construction activities, unless the design worsens or significantly alters these risks.

*Taking account of pre-construction information*

65 A designer must take account of pre-construction information the client or principal designer provides when making decisions about the extent to which they can eliminate foreseeable risks through the designs they produce; and, where these risks cannot be eliminated, the steps they take to reduce or control them. Sub-section 6.1 gives further guidance on the requirements relating to pre-construction information. Appendix 2 shows how pre-construction information relates to and influences other types of information during a construction project involving more than one contractor.

*Eliminating, reducing or controlling foreseeable risks through design*

66 When designing, a designer must consider the risks people may be exposed to through the course of both constructing a building and using it once it is constructed. Designing is a process that often continues throughout the project and the following questions should be considered when design is carried out:

- (a) Can I get rid of the problem (or hazard) altogether? For example, can air-conditioning plant on a roof be moved to ground level, so work at height is not required for either installation or maintenance?
- (b) If not, how can I reduce or control the risks, so that harm is unlikely or the potential consequences less serious? For example, can I place the plant within a building on the roof, or provide a barrier around the roof?

67 If risks cannot be eliminated altogether, a designer should apply the principles below in deciding how to reduce or control the remaining risks – if possible, in the following order:

- (a) provide a less risky option, for example, switch to using paving lighter in weight, to reduce musculoskeletal disorders such as back problems;

- (b) make provisions so the work can be organised to reduce exposure to hazards, for example, make provision for traffic routes so barriers can be provided between pedestrians and traffic;
- (c) ensure that those responsible for planning and managing the work are given the information they will need to manage remaining risks, for example, tell them about loads that will be particularly heavy or elements of the building that could become unstable. This can be achieved through providing key information on drawings or within models, for example, by using Building Information Modelling (BIM).

68 When addressing risks, a designer is expected to do as much as is reasonable at the time the design is prepared. Risks that cannot be addressed at the initial stage of a project may need to be reviewed later on during detailed design. On projects involving more than one contractor, the principal designer will lead in managing the review process.

69 A designer must provide information to other dutyholders using or implementing the design. This includes information for:

- (a) the principal designer:
  - (i) about *significant risks*<sup>7</sup> associated with the design that cannot be eliminated, so it can form part of the pre-construction information (see sub-section 6.1 and Appendix 2 for further guidance);
  - (ii) to take into account in preparing or revising the health and safety file (see sub-section 6.3 for further guidance);
- (b) other designers;
- (c) the principal contractor (or the contractor on a single-contractor project) who has responsibility for preparing, reviewing and revising the construction phase plan for the project (see sub-section 6.2 for further guidance); and
- (d) contractors who construct the design.

70 The designer should agree with the principal designer the arrangements for sharing information to avoid omissions or duplicated effort. Those who need the information should be given it at the right time. For example, in preparing the construction phase plan, the information should be provided well before the construction phase begins.

### **Cooperating with other dutyholders**

71 Designers should liaise with any other designers, including the principal designer, so that work can be coordinated to establish how different aspects of designs interact and influence safety and health. This includes temporary and permanent works designers. Designers must also cooperate with contractors and principal contractors so that their knowledge and experience about, for example, the practicalities of building the design, is taken into account.

72 Depending on the nature and extent of design work, there may be a need to carry out design reviews. Reviews enable the project team to focus on safety and health matters alongside other key aspects of the project. This can be done as part of the normal design

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<sup>7</sup>Significant risks not necessarily those that involve the greatest risks, but those (including health risks) that are not likely to be obvious, are unusual, or likely to be difficult to manage effectively.

process. The need for such reviews is likely to continue throughout the project although their frequency and the level of detail covered should remain proportionate to the scale and complexity of the design work.

#### 4.5 Who is a principal designer?

73 A principal designer is the designer with control over the pre-construction phase of the project. This is the very earliest stage of a project from concept design through to planning the delivery of the construction work. The principal designer must be appointed in writing by the client.

74 The principal designer can be an organisation or an individual that has:

- (a) the technical knowledge of the construction industry relevant to the project;
- (b) the skills, knowledge and experience to understand, manage and coordinate the pre-construction phase, including any design work carried out after construction begins.

Where the principal designer is an organisation, it must have the organisational capability to carry out the role.

75 Principal designers may have separate duties as designers (see paragraphs 59–72).

#### 4.6 Why is the principal designer important?

76 In liaison with the client and principal contractor, the principal designer has an important role in influencing how the risks to safety and health should be managed and incorporated into the wider management of a project. Decisions about the design taken during the pre-construction phase can have a significant effect on whether the project is delivered in a way that secures safety and health. The principal designer's role involves coordinating the work of others in the project team to ensure that significant and foreseeable risks are managed throughout the design process.

#### 4.7 What must a principal designer do?

##### ***Planning, managing, monitoring and coordinating the pre-construction phase***

77 In carrying out the duty to plan, manage, monitor and coordinate the pre-construction phase, principal designers must take account of the general principles of prevention (see paragraph 5 and Appendix 1) and, where relevant, the content of:

- (a) pre-construction information (see sub-section 6.1);
- (b) any construction phase plan (see sub-section 6.2). This will be relevant when the plan has implications for design work carried out after the construction phase has started, for example, ground contamination discovered affecting the choice of piling method; and
- (c) any existing safety and health file (see sub-section 6.3). In cases where a safety and health file has been prepared as part of previous construction work on the building, it should have information which will help the planning, management and coordination of the pre-construction phase.

This information should be taken into account particularly when decisions are being taken about design, technical and organisational issues to plan which items or stages of work can take place at the same time or in what sequence; and when estimating the time needed to complete certain items or stages of work.

78 The principal designer's work should focus on ensuring the design work in the pre-construction phase contributes to the delivery of positive safety and health outcomes. Bringing together designers as early as possible in the project, and then on a regular basis, to ensure everyone carries out their duties, will help to achieve this. This can be done as part of the normal design process. Regular design meetings chaired by the principal designer are an effective way to:

- (a) discuss the risks that should be addressed during the pre-construction phase;
- (b) decide on the control measures to be adopted; and
- (c) agree the information that will help prepare the construction phase plan.

79 If the principal designer appoints any designers they must check they have sufficient skills, knowledge, experience and (if they are an organisation) the organisational capability to carry out the work. These checks should be carried out before appointment (see paragraphs 38–42 for further guidance).

80 The principal designer's role continues into the construction phase when design work is carried out and when gathering and preparing information for the safety and health file.

#### ***Identifying, eliminating or controlling foreseeable risks***

81 Principal designers must ensure, as far as reasonably practicable, that foreseeable risks to safety and health are identified. In practice, this will involve the principal designer working with other designers involved with the project. The risks that should be identified are the significant ones and which are likely to arise:

- (a) while carrying out construction work; or
- (b) during maintenance, cleaning or using the building as a workplace once it is built.

Identifying insignificant risks is not an effective way of alerting other dutyholders to the important design issues they need to know about. Designers should be able to demonstrate they have addressed only the significant risks.

82 Once the risks have been identified, principal designers must follow the approach to managing them set out in the general principles of prevention (see Appendix 1). The principal designer must, as far as reasonably practicable, ensure that the design team:

- (a) **eliminate** the risks associated with design elements.  
If this is not possible (for instance because of competing design considerations such as planning restrictions, specifications, disproportionate costs or aesthetics):
- (b) **reduce** any remaining risks; or
- (c) **control** them,

to an acceptable level. This relies on exercising judgement in considering how to manage the risks. The focus should be on those design elements where there is a significant risk of injury or ill health.

### ***Ensuring coordination and cooperation***

83 Principal designers must ensure as far as reasonably practicable that:

- (a) everyone involved in working on the pre-construction phase cooperates with each other. They must establish that effective communication is occurring and that information is shared within the project team. This could involve holding meetings with others in the design team. Progress meetings with the client and the principal contractor also provide a way of ensuring work on the project is properly coordinated;
- (b) designers comply with their duties. Appropriate checks should be made to ensure designers are dealing with design risks appropriately. This can be done as part of the design process and through regular progress meetings;
- (c) designers provide information about elements of the design which present significant risks that cannot be eliminated. This should include information about unusual or complex risks that are more likely to be missed or misunderstood by contractors or others on the project rather than risks that are well known and understood.

### ***Providing pre-construction information***

84 Pre-construction information is information already in the client's possession or which is reasonably obtainable. It must be relevant, have an appropriate level of detail and be proportionate to the nature of risks involved in the project.

85 The client has responsibility for pre-construction information (see paragraphs 33–34). The principal designer must help the client bring together the information the client already holds (such as any existing safety and health file or asbestos survey). The principal designer should then:

- (a) assess the adequacy of existing information to identify any gaps in the information which it is necessary to fill;
- (b) provide advice to the client on how the gaps can be filled and help them in gathering the necessary additional information; and
- (c) provide, as far as they are able to, the additional information promptly and in a convenient form to help designers and contractors who:
  - (i) are being considered for appointment; or
  - (ii) have already been appointed, to carry out their duties.

Sub-section 6.1 gives further guidance on the requirements relating to pre-construction information. Appendix 2 shows how pre-construction information relates to and influences other types of information during a construction project involving more than one contractor.

### ***Liaising with the principal contractor***

86 The principal designer must liaise with the principal contractor for the duration of their appointment. During the pre-construction phase this must cover sharing information that may affect the planning, management, monitoring and coordination of the construction phase – in particular, the information needed by the principal contractor to prepare the construction

phase plan (see sub-section 6.2). Liaison should also extend into the construction phase to deal with ongoing design and obtaining information for the safety and health file. This could be done by holding regular progress meetings with the principal contractor.

87 If the principal designer's appointment finishes before the end of the project, they must ensure that the principal contractor has all the relevant information so that the principal contractor:

- (a) is aware of the risks which have not been eliminated in the designs;
- (b) understands the means employed to reduce or control those risks; and
- (c) understands the implications for implementing the design work for the rest of the project.

The principal designer should also arrange a handover of the safety and health file to the principal contractor and make them aware of any issues to take into account when reviewing, updating and completing it.

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## 5 Contractors

### 5.1 Who is a principal contractors

88 A principal contractor is the organisation or person that coordinates the work of the construction phase of a project involving more than one contractor, so it is carried out in a way that secures safety and health. They are appointed by the client and must possess the skills, knowledge, and experience, and (if an organisation) the organisational capability to carry out their role effectively given the scale and complexity of the project and the nature of the safety and health risks involved.

89 There may be occasions where two or more projects are taking place on the same site at the same time, but are run independently of one another. Whatever the circumstances, **it is essential that there is clarity over who is in control during the construction phase in any part of the site at any given time.** Where it is not possible for one principal contractor to be in overall control, those principal contractors involved must:

- (a) cooperate with one another;
- (b) coordinate their work; and
- (c) take account of any shared interfaces between the activities of each project (for example, shared traffic routes).

### 5.2 Why is a principal contractor important?

90 Good management of safety and health on site is crucial to the successful delivery of a construction project. In liaison with the client and principal designer, principal contractors have an important role in managing the risks of the construction work and providing strong leadership to ensure standards are understood and followed.

### 5.3 What must a principal contractor do?

#### ***Planning, managing, monitoring and coordinating the construction phase***

##### *General*

91 In planning, managing, monitoring and coordinating the construction phase, a principal contractor must take account of the general principles of prevention (see Appendix 1). They must take account of these principles when:

- (a) decisions are being taken to plan which items or stages of work can take place at the same time or in sequence; and
- (b) estimating the time certain items or stages of work will take to complete.

92 The principal contractor should be appointed by the client before the construction phase begins to allow them to work closely with:

- (a) the client for the life of the project; and
- (b) the principal designer for the remainder of their appointment.



This work must include liaising with the principal designer for the purposes of planning, managing, monitoring and coordinating the pre-construction phase. As the project moves into the construction phase, the principal contractor should take the lead in planning, managing, monitoring and coordinating the project while continuing to liaise with the client and principal designer.

93 The effort the principal contractor devotes to carrying out their duties should be in proportion to the size and complexity of the project and the risks involved. The principal contractor should expect and receive help from other dutyholders in identifying the risks associated with the work and determining the controls that need to be put in place. In particular:

- (a) the client must provide (with help from the principal designer) the pre-construction information (see sub-section 6.1); and
- (b) the principal designer must provide any other information needed for the preparation of the construction phase plan (see sub-section 6.2).

94 A principal contractor must also ensure anyone they appoint has the skills, knowledge, and experience and, where they are an organisation, the organisational capability to carry out the work in a way that secures safety and health (see paragraphs 38–42).

#### *Planning*

95 Planning must take into account the risks to all those affected – workers, members of the public and the client's employees, if working in an occupied premises. It must cover:

- (a) the risks likely to arise during construction work;
- (b) the measures needed to protect those affected by planning to provide:
  - (i) and maintain the right plant and equipment;
  - (ii) the necessary information, instruction and training; and
  - (iii) the right level of supervision;
- (c) the resources (including time) needed to organise and deliver the work, including its management, monitoring and coordination.

96 The pre-construction information (see sub-section 6.1) and any key design information, identifying risks that need to be managed during construction work, will be helpful in planning the construction phase and drawing up the construction phase plan (see sub-section 6.2). Appendix 2 shows how pre-construction information and the construction phase plan relate to and influence other types of information during a construction project involving more than one contractor.

#### *Managing*

97 To manage the construction phase, principal contractors must ensure that:

- (a) those engaged to carry out the work are capable of doing so;
- (b) effective, preventative and protective measures are put in place to control the risks; and
- (c) the right plant, equipment and tools are provided to carry out the work involved.

98 Managing people to prevent and control risk requires leadership. Principal contractors can demonstrate visible leadership through the actions of their managers. These actions include setting standards for working practices and providing an example by following them. Leaders in safety and health should have a strong grasp of what is needed in a given situation, make clear decisions, and be able to communicate effectively.

99 A systematic approach to managing should be taken to ensure workers understand:

- (a) the risks and control measures on the project;
- (b) who has responsibility for safety and health;
- (c) that consistent standards apply throughout the project and will be checked frequently;
- (d) where they can locate safety and health information which is easily understandable, well organised and relevant to the site; and
- (e) that incidents will be investigated and lessons learned.

100 Good supervision is part of showing leadership in safety and health. It:

- (a) focuses workers' attention on risks, and how to prevent them;
- (b) shows commitment to establishing and maintaining the control measures;
- (c) involves consulting effectively with workers, taking into account their views; and
- (d) challenges unsafe conditions and working practices when they arise.

Principal contractors do not have to undertake detailed supervision of contractors' work.

#### *Monitoring*

101 Standards should be checked regularly given the rapidly changing nature of a construction site. Effective monitoring involves:

- (a) time and effort (with sufficient resource having been set aside for this at the planning stage – see paragraph 95);
- (b) treating safety and health in the same way as other important aspects of the business;
- (c) taking prompt action where necessary; and
- (d) using a mix of performance measures – both active and reactive in nature, for example:
  - (i) routine checks of site access and work areas and plant and equipment, or health risk management to prevent harm (active);
  - (ii) investigating near-miss incidents and injuries as well as monitoring cases of ill health (reactive).

#### *Coordinating*

102 A principal contractor has a specific duty to ensure that contractors under their control cooperate with each other so the risks to themselves and others affected by the work are managed effectively. This includes ensuring contractors who start work at different stages of the construction phase cooperate with each other so any information and instruction relevant for a new contractor to carry out their work safely is provided to them. Regular planning meetings between the principal contractor and contractors are an effective way of ensuring this.

103 The need for coordination does not just apply when implementing the requirements in this Guidelines, but also when complying with any other safety and health requirements. In coordinating the work of employers and self-employed under their control, principal contractors must ensure they:

- (a) apply the general principles of prevention (see Appendix 1); and
- (b) where required, follow the construction phase plan (see sub-section 6.2).

This will involve the principal contractor liaising with those involved to establish a common understanding of the safety and health standards expected and gaining their cooperation in meeting these standards. The extent to which the principal contractor should liaise will depend on the risks involved.

104 The principal contractor should also work with the client to ensure there is cooperation with others outside the construction site who may be affected by the activities on site. This includes coordinating the activities of contractors on the principal contractor's site with contractors on any neighbouring sites, particularly where the activities on each site combine to create hazards outside the sites that need to be addressed jointly.

#### ***Providing suitable site inductions***

105 The principal contractor must ensure every site worker is given a suitable site induction. The induction should be site specific and highlight any particular risks (including those listed in Schedule 3) and control measures that those working on the project need to know about. The following issues should be considered:

- (a) senior management commitment to safety and health;
- (b) outline of the project;
- (c) management of the project;
- (d) first-aid arrangements;
- (e) accident and incident reporting arrangements;
- (f) arrangements for briefing workers on an ongoing basis, for example, toolbox talks;
- (g) arrangements for consulting the workforce on health and safety matters;
- (h) individual worker's responsibility for health and safety.

106 Site inductions should also be provided to those who do not regularly work on the site, but who visit it on an occasional (for example, architects) or once-only basis (for example, students). **The inductions should be proportionate to the nature of the visit.** Inductions provided to escorted visitors need not have the detail that unescorted visitors should have. Escorted visitors only need to be made aware of the main hazards they may be exposed to and the control measures.

#### ***Preventing unauthorised access to the site***

107 The principal contractor must ensure reasonable steps are taken to prevent unauthorised access onto the construction site. They should liaise with the contractors on site to physically define the site boundaries by using suitable barriers which take account of the nature of the site and its surrounding environment. The principal contractor should also take steps to ensure that only those authorised to access the site do so.

108 Special consideration will be required for sites that have:

- (a) rights of way through them;
- (b) other work areas next to them, for example, a shop refurbishment in a shopping centre;
- (c) occupied houses next to them, especially on new-build housing estates;
- (d) children or vulnerable people nearby, for example, schools or care homes located near the site.

#### ***Providing welfare facilities***

109 The principal contractor must ensure that suitable and sufficient welfare facilities are provided and maintained throughout the construction phase. What is suitable and sufficient will depend on the size and nature of the workforce involved in the project. Facilities must be made available before any construction work starts and should be maintained until the end of the project. See paragraphs 146–148.

110 The principal contractor should liaise with other contractors involved with the project to ensure appropriate welfare facilities are provided. Such liaison should continue for the duration of the construction phase and take account of any changes in the nature of the site which require, in turn, changes to the provision of welfare facilities.

#### ***Liaising with the principal designer***

111 The principal contractor must liaise with the principal designer for the duration of the project. The early appointment of a principal contractor by the client will allow their construction expertise to be used from the earliest stages of designing and planning a project. They should also liaise with the principal designer throughout the construction phase on matters such as changes to the designs and the implications these changes may have for managing the safety and health risks.

112 Liaison should cover drawing together information the principal designer will need:

- (a) to prepare the safety and health file (see sub-section 6.3); or
- (b) that may affect the planning and management of the pre-construction phase. The pre-construction information is important for planning and managing this phase and the subsequent development of the construction phase plan (see sub-section 6.2). Sub-section 6.1 contains further guidance on pre-construction information, including the information principal contractors should consider providing to both the principal designer and the client.

#### ***Consult and engage with workers***

113 The importance of involving workers in decisions about safety and health is a vital element to securing safety and health in the construction industry. A principal contractor has a duty under the Occupational Safety and Health Act 1994 (OSHA) to involve the workforce in matters of safety, health and welfare. This is in addition to the duty on all employers to consult with their employees (or their representatives) on safety and health matters under separate legislation (see Occupational Safety and Health (Safety and Health Committee) Regulations 1996 and Occupational Safety and Health (Safety and Health Officer) Regulations 1997).

114 The principal contractor must consult and engage with the workforce to ensure that measures for their safety, health and welfare are developed, promoted and checked for effectiveness. Consultation must be carried out in a timely manner. If consultation has already taken place through a direct employer, it is not required again.

115 Effective worker involvement will develop from effective consultation and cooperation between the principal contractor and other contractors on site. The following techniques help in achieving this:

- (a) commitment by managers to lead by example, to provide the resources and set the standards of safety and health expected;
- (b) implementation of a range of ways to communicate, ensure cooperation with and consult the workforce in managing safety and health; and
- (c) collecting evidence that worker involvement is effective and that cooperation between contractors is effective.

116 The construction workforce should also have access to, and be able to take copies of, any information the principal contractor has which may affect their safety, health and welfare. The exceptions to this are, any information:

- (a) the disclosure of which would be against the interests of national security;
- (b) which the principal contractor could not disclose without contravening a prohibition imposed by or under an enactment;
- (c) relating specifically to an individual, unless that individual has consented to its being disclosed;
- (d) the disclosure of which would, for reasons other than its effect on safety, health or welfare at work, cause substantial injury to the principal contractor's undertaking or, where the information was supplied to the principal contractor by another person, to the undertaking of that other person;
- (e) obtained by the principal contractor for the purpose of bringing, prosecuting or defending any legal proceedings.

#### 5.4 Who is a contractor

117 Anyone who directly employs or engages construction workers or manages construction is a contractor. Contractors include sub-contractors, any individual, sole trader, self-employed worker, or business that carries out, manages or controls construction work as part of their business. This also includes companies that use their own workforce to do construction work on their own premises. The duties on contractors apply whether the workers under their control are employees, self-employed or agency workers.

118 Where contractors are involved in design work, including for temporary works, they also have duties as designers (see paragraphs 59–72).

#### 5.5 Why is a contractor important?

119 Contractors and the workers under their control are those most at risk of injury and ill health. They can influence the way work is carried out to secure their own safety and health and that of others affected. They have an important role in planning, managing and

monitoring the work (in liaison with the principal contractor, where appropriate) to ensure risks are properly controlled. The key to this is the proper coordination of the work, underpinned by good communication and cooperation with others involved.

## 5.6 What must a contractor do?

120 Contractors have a number of specific duties. They must also comply with the requirements of paragraphs 38–50 as they apply to contractors. These include the requirements:

- (a) on anyone appointing a designer or contractor (such as the contractor appointing a sub-contractor) to ensure the designer or contractor has the skills, knowledge and experience and, where relevant, organisational capability to carry out the work for which they are being appointed; and
- (b) to cooperate with other dutyholders.

### ***Making clients aware of their duties***

121 Contractors must not carry out any construction work on a project unless they are satisfied that the client is aware of the duties the client has under this Guidelines. In cases where the contractor is the only one involved, they must liaise directly with the client to establish this. Liaison can be done as part of routine business during early meetings with the client to discuss the project. Contractors should make sure they have a sufficient knowledge of client duties as they affect the project so they can give proper advice. The level of advice will depend on the knowledge and experience of the client and the complexities of the project.

### ***Planning, managing and monitoring construction work***

#### *General*

122 Contractors are required to plan, manage and monitor the construction work under their control so it is carried out in a way that controls the risks to safety and health. The effort devoted to planning, managing and monitoring should be proportionate to the size and complexity of the project and the nature of risks involved.

123 On projects involving more than one contractor, this will involve the contractor coordinating the planning, management and monitoring of their own work with that of the principal contractor and other contractors, and where appropriate the principal designer. Such coordination could involve regular progress meetings with other dutyholders to ensure that the contractor's arrangements for planning, managing and monitoring their own work can feed into, and remain consistent with, the project-wide arrangements. For single contractor projects, the arrangements to plan, manage and monitor the construction phase will normally be simpler. Paragraphs 124–129 provide guidance in each circumstance.

#### *Planning*

124 In planning the work, the contractor must take into account the risks to those who may be affected, for example, members of the public and those carrying out the construction work. Planning should cover the same considerations as those for the principal contractor

(see paragraphs 95–96), including considering the risks and ensuring the measures needed to protect those affected are in place.

125 On projects involving more than one contractor, each contractor must plan their own work so it is consistent with the project-wide arrangements. Contractors should expect help from other dutyholders, for example, the client who must provide the pre-construction information (Sub-section 6.1 gives more guidance on the provision of pre-construction information).

126 On single contractor projects, the contractor is responsible for planning the construction phase and for drawing up the construction phase plan before setting up the construction site. The client must provide any relevant pre-construction information they possess and the time and other resources to help the contractor do this. See paragraph 131 and sub-section 6.2 for further guidance on drawing up the construction phase plan.

#### *Managing*

127 The arrangements for managing construction work must take into account the same issues that principal contractors must consider (see paragraphs 97–100).

#### *Monitoring*

128 The contractor should monitor their work to ensure that the safety and health precautions are appropriate, remain in place and are followed in practice. Effective monitoring by the contractor must address the same issues principal contractors must consider (see paragraph 101). This includes using a mix of measures to check performance and taking prompt action when issues arise.

129 On projects involving more than one contractor, as part of the duty to cooperate with other dutyholders, the contractor should provide the principal contractor with any relevant information that stems from their own monitoring so the principal contractor can monitor the management of safety and health at a project-wide level.

#### *Complying with directions and the construction phase plan*

130 For projects involving more than one contractor, the contractor is required to comply with any directions to secure safety and health given to them by the principal designer or principal contractor. They are also required to comply with the parts of the construction phase plan that are relevant to their work, including the site rules (see sub-section 6.2).

#### *Drawing up a construction phase plan*

131 For single contractor projects, the contractor must ensure a construction phase plan is drawn up as soon as practicable **before** the construction site is set up. Guidance on contractors' duties in relation to the construction phase plan is set out in sub-section 6.2.

### ***Appointing and employing workers***

#### *Appointing workers*

132 When a contractor employs or appoints an individual to work on a construction site, they should make enquiries to make sure the individual:

- (a) has the skills, knowledge, training and experience to carry out the work they will be employed to do in a way that secures safety and health for anyone working on the site; or
- (b) is in the process of obtaining them. Paragraphs 133–143 guidance on what a contractor should consider when appointing anyone who has gaps in the skills, knowledge or experience necessary for the work.

133 Sole reliance should not be placed on industry certification cards or similar being presented to them as evidence that a worker has the right qualities. Nationally recognised qualifications (such as Upper Secondary Vocational Education and National Occupational Skills Standard (NOSS)) can provide contractors with assurance that the holder has the skills, knowledge, training and experience to carry out the task(s) for which they are appointed. Contractors should recognise that training on its own is not enough. Newly trained individuals need to be supervised and given the opportunity to gain positive experience of working in a range of conditions.

134 When appointing individuals who may be skilled but who do not have any formal qualifications, contractors may need to assess them in the working environment.

#### *Training workers*

135 To establish whether training is necessary for any worker, a contractor should:

- (a) assess the existing safety and health skills, knowledge, training and experience of their workers;
- (b) compare these existing attributes with the range of skills, knowledge, training and experience they will need for the job; and
- (c) identify any shortfall between (a) and (b). The difference between the two will be the 'necessary training'.

As a general rule, if the person being assessed demonstrates the required qualities, no further training should be needed.

136 This assessment should take account of the training required by other safety and health legislation (for example, section 24 of OSHA and Factory and Machinery (Building Operations and Work of Engineering Construction) (Safety) Regulations 1984) as well as that needed to meet the requirements of this Guidelines.

137 Assessing training needs should be an ongoing process throughout the project. Further training may be required if:

- (a) the risks to which people are exposed alter due to a change in their working tasks;
- (b) new technology or equipment is introduced; or
- (c) the system of work changes.

Skills can also decline if they are not used regularly. Particular attention should be paid to people who deputise for others on an occasional basis – they may need more frequent further training than those who do the work regularly.



138 Contractors should also consider 'softer skills', such as the ability to foresee risk, maintain sensitivity to risk, anticipate mistakes others might make and to communicate clearly, as well as the more technical skills workers require for their work.

### **Providing supervision**

139 A contractor who employs workers or manages workers under their control must ensure that appropriate supervision is provided. The level of supervision provided will depend on the risks to safety and health involved, and the skills, knowledge, training and experience of the workers concerned.

140 Workers will require closer supervision if they are young, inexperienced, or starting a new work activity. Other factors that should be considered when assessing the level of supervision needed include the level of individuals' safety awareness, education, physical agility, literacy and attitude. Even experienced workers may need an appropriate level of supervision if they do not have some or all of the skills, knowledge, training and experience required for the job and the risks involved. Workers should always know how to get supervisory help, even when a supervisor is not present.

141 Supervisors are a vital part of effective management arrangements. Effective supervisors are those who have the skills, knowledge, training, experience and leadership qualities to suit the job in hand. Good communication and people management skills on site are important qualities for supervisors. Supervisors should possess competencies relating to *pre-job planning; organising of work flow; establishing effective communication; a knowledge of routine and non-routine work tasks; knowledge and application of effective team building skills; assessing employee stress levels; directing worker tasks; and responsibilities and disciplinary procedures and conflict resolution*<sup>8</sup>. Where site workers are promoted to a supervisory role, they should be provided with nationally recognised site supervisor training which includes leadership and communication skills.

142 The role of the supervisor may include team leading, briefing and carrying out toolbox talks. It may also include coaching and encouragement of individual workers and supporting other formal and informal means of engaging with workers. The supervisor has a particularly important part to play as a front-line decision maker in emergencies or when workers on site face immediate risks that may require work to stop (see paragraph 47).

### **Providing information and instructions**

143 Contractors should provide their employees and workers under their control with the information and instructions they need to carry out their work without risk to safety and health. This must include:

- (a) suitable site induction where this has not been provided by the principal contractor. In such cases, the guidance provided in paragraphs 105–106 for principal contractors is relevant to contractors;
- (b) the procedures to be followed in the event of serious and imminent danger to safety and health. These should make clear that any worker exposed to any such danger should

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<sup>8</sup>Hardison et. al. *Identifying construction supervisor competencies for effective site safety*. Safety Science 65: 2014. pp. 45-53.

stop work immediately, report it to the contractor and go to a place of safety. The procedures should:

- (i) include details of the person to whom such instances should be reported and who has the authority to take whatever prompt action is needed;
  - (ii) take account of the relevant requirements which set out provisions relating to emergency procedures, emergency routes and exits and fire detection and fire-fighting;
- (c) information on the hazards on site relevant to their work (for example, site traffic), the risks associated with those hazards and the control measures put in place (for example, the arrangements for managing site traffic).

See paragraphs 48–50 for more guidance.

### ***Preventing unauthorised access to the site***

144 A contractor must not begin work on a construction site unless reasonable steps have been taken to prevent unauthorised access to the site. For projects involving more than one contractor that are:

- (a) small and straightforward, this can be carried out via a phone call or at an early meeting with the principal contractor (who is required to ensure reasonable steps are taken in this respect) before the contractor starts work on site;
- (b) larger and more complex (for example, where different contractors are authorised to access different parts of the site), contractors should liaise with the principal contractor to make sure they understand which parts of the site they are authorised to access and when before they start work.

145 For projects involving only one contractor, the contractor must do whatever is proportionate to prevent unauthorised access before starting work on the site. In these circumstances, the guidance provided for principal contractors is also relevant for contractors (see paragraphs 107–108).

### ***Providing welfare facilities***

146 Contractors are required to provide welfare facilities which meet the minimum requirements set out in Appendix 4. This duty only extends to the provision of welfare facilities for the contractor's own employees who are working on a construction site or anyone else working under their control. Facilities must be made available before any construction work starts and should be maintained until the end of the project.

147 The duty is as *far as is reasonably practicable*, so contractors should do whatever is proportionate in providing the welfare facilities set out in Appendix 4.

148 On projects involving more than one contractor, meeting this duty will involve discussing and agreeing with the principal contractor who has a similar duty to provide welfare facilities (see paragraphs 109–110). For projects involving only one contractor, the contractor themselves must ensure that suitable welfare facilities are available.

## 6 The construction work information

### 6.1 The pre-construction information

149 This sub-chapter gives guidance on the requirements for pre-construction information and the actions on each dutyholder. Appendix 2 shows how pre-construction information relates to and influences other types of information during a construction project involving more than one contractor.

#### *What is pre-construction information?*

150 Pre-construction information provides the safety and health information needed by:

- (a) designers and contractors who are bidding for work on the project, or who have already been appointed to enable them to carry out their duties;
- (b) principal designers and principal contractors in planning, managing, monitoring and coordinating the work of the project.

Pre-construction information provides a basis for the preparation of the construction phase plan (see sub-section 6.2). Some material may also be relevant to the preparation of the safety and health file (see sub-section 6.3).

151 Pre-construction information is defined as information about the project that is already in the client's possession or which is reasonably obtainable by or on behalf of the client. The information must:

- (a) **be relevant to the particular project;**
- (b) **have an appropriate level of detail; and**
- (c) **be proportionate to the risks involved.**

152 Pre-construction information should be gathered and added to as the design process progresses and reflect new information about the safety and health risks and how they should be managed. Preliminary information gathered at the start of the project is unlikely to be sufficient.

153 When pre-construction information is complete, it must include proportionate information about:

- (a) the project, such as the client brief and key dates of the construction phase;
- (b) the planning and management of the project such as the resources, budget and time being allocated to each stage of the project and the arrangements to ensure there is cooperation between dutyholders and the work is coordinated;
- (c) the safety and health hazards of the site, including design and construction hazards and how they will be addressed;
- (d) any relevant information in an existing safety and health file.

154 The information should be in a convenient form and be clear, concise and easily understandable to help other dutyholders involved in the project to carry out their duties.

### ***What must duty holders do?***

#### *The client*

155 The client has the main duty for providing pre-construction information. They must provide this information as soon as practicable to each:

- (a) designer (including the principal designer); and
- (b) contractor (including the principal contractor)

being considered for appointment, or already appointed to the project. For projects involving more than one contractor, the client can expect help from the principal designer appointed for the project (see paragraphs 159–161) who must assist the client in drawing this information together and providing it to the designers and contractors involved. For single contractor projects, it is the client's responsibility alone – although they should liaise with the contractor (and any designer) they appoint to provide whatever information is needed.

156 The pre-construction information will evolve as the project progresses towards the construction phase. At first, drawing together the information should involve identifying relevant documents the client already holds. These might include a safety and health file produced as a result of earlier construction work, any surveys or assessments that have already been carried out (for example, asbestos surveys), structural drawings, etc. For projects involving more than one contractor, the client must pass this information to the principal designer as soon after their appointment as possible. In liaison with the principal designer, the client should then:

- (a) assess the adequacy of this information to see if there are significant gaps;
- (b) take reasonable steps to obtain the information needed to fill any gaps identified by, for example, commissioning relevant surveys; and
- (c) then provide the information to every designer and contractor as soon as practicable.

157 The stage at which it is practicable to provide information will depend on a number of factors such as the scale and complexity of the project, when dutyholders are appointed and when information is obtained. However, the client, together with the principal designer, must also take account of when designers and contractors will need pre-construction information to enable them to carry out their duties. For example:

- (a) designers or contractors who are seeking appointment for work on the project should have sufficient information made available to them at a time which allows them to put together a bid based on a clear understanding of the nature of the work involved;
- (b) designers already appointed should be provided with sufficient information at a stage early enough to enable them to judge whether it is reasonably practicable to eliminate any foreseeable safety and health risks in the design process and, where it is not, the steps they should take to reduce or control the remaining risks. It may not be possible to provide this information all at once, in which case it should be provided as soon as it becomes available;
- (c) contractors already appointed should be provided with the information they will need to plan, manage and monitor their work.

*The designer*

158 The designer must take account of the pre-construction information when preparing or modifying designs. They must be provided with this information by the client as soon as practicable (see paragraphs 155–157), assisted by the principal designer where appropriate (see paragraphs 11–13). The information should be:

- (a) sufficient to enable the designer to judge whether it is reasonably practicable to eliminate foreseeable risks in their designs, and, where it is not, help identify the steps they should take to reduce and control the remaining risks; and
- (b) provided at a stage where designers can take account of it – as early in the design process as is practicable.

*The principal designer*

159 The principal designer must help the client in providing the pre-construction information to each designer and contractor appointed, or being considered for appointment. The extent of the help required will depend on the nature of the project, the risks involved and the client's level of knowledge and experience of construction work. Taking this into account, the principal designer should agree with the client the level of support the client needs to ensure the information is made available when others need it.

160 Soon after their appointment, the principal designer should be provided with any relevant information the client already holds. This might include any safety and health file produced as a result of earlier construction work, any surveys that have already been carried out (for example, asbestos surveys), structural drawings, etc. The principal designer must then help the client to:

- (a) assess the adequacy of this information to see if there are significant gaps; and
- (b) take reasonable steps to obtain the information needed to fill the gaps identified by, for example, commissioning surveys.

161 As far as it is within their control, the principal designer must then work with the client to provide the information in a convenient form and as soon as practicable. The information provided to those seeking appointment must be sufficient and in good time to allow them to put together a bid based on a clear understanding of the nature of the work involved. After their appointment, the stage at which information is provided will depend on factors such as the scale and complexity of the project, and when the information is obtained. However, the principal designer, together with the client, must also take account of when designers and contractors will need pre-construction information to enable them to carry out their duties. The client guidance (see paragraph 157) is also relevant for principal designers.

*The principal contractor*

162 The principal contractor has no specific duty in relation to pre-construction information. However, they must liaise with the principal designer for the duration of the principal designer's appointment and share any information relevant to the planning, management, monitoring or coordination of the pre-construction phase.

#### *The contractor*

163 The contractor has no specific duty in relation to pre-construction information. However, for projects involving more than one contractor, contractors must cooperate with the client, principal designer and principal contractor to ensure the pre-construction information is right.

### 6.2 The construction phase plan

164 This sub-section gives guidance on the requirements for the construction phase plan and the actions on each dutyholder. Appendix 2 shows how the construction phase plan relates to and influences other types of information during a construction project involving more than one contractor.

165 For projects involving more than one contractor, the principal contractor must ensure the plan is drawn up during the pre-construction phase and **before** the construction site is set up. It must take into account the information the principal designer holds, such as the pre-construction information (see sub-section 6.1) and any information obtained from designers. During the construction phase, the principal contractor must ensure the plan is appropriately reviewed, updated and revised, so it remains effective.

166 For single contractor projects, the contractor must ensure the construction phase plan is drawn up. Guidance on this can be found in paragraph 131.

#### ***What is construction phase plan***

167 A construction phase plan is a document that must record the:

- (a) safety and health arrangements for the construction phase;
- (b) site rules; and
- (c) where relevant, specific measures concerning work that falls within one or more of the categories listed in Appendix 3.

168 The plan must record the arrangements for managing the significant safety and health risks associated with the construction phase of a project. It is the basis for communicating these arrangements to all those involved in the construction phase, so it should be easy to understand and as simple as possible.

169 In considering what information is included, the emphasis is that it:

- (a) is relevant to the project;**
- (b) has sufficient detail to clearly set out the arrangements, site rules and special measures needed to manage the construction phase; but**
- (c) is still proportionate to the scale and complexity of the project and the risks involved.**

The plan should **not** include documents that get in the way of a clear understanding of what is needed to manage the construction phase, such as generic risk assessments, records of how decisions were reached or detailed safety method statements.

170 The following list of topics should be considered when drawing up the plan:

- (a) a description of the project such as key dates and details of key members of the project team;
- (b) the management of the work including:
  - (i) the safety and health aims for the project;
  - (ii) the site rules;
  - (iii) arrangements to ensure cooperation between project team members and coordination of their work, for example regular site meetings;
  - (iv) arrangements for involving workers;
  - (v) site induction;
  - (vi) welfare facilities; and
  - (vii) fire and emergency procedures;
- (c) the control of any of the specific site risks listed in Appendix 3 where they are relevant to the work involved.

### ***What must dutyholders do?***

#### *The client*

171 The client must ensure a construction phase plan is drawn up **before** the construction phase begins. For projects involving more than one contractor, the principal contractor is responsible for drawing up the plan or for making arrangements for it to be drawn up (see paragraphs 176–179). For single contractor projects, it is the contractor who is responsible for ensuring that the plan is drawn up (see paragraphs 180–181).

172 The client must ensure that the principal contractor (or, where relevant, the contractor) is provided with all the available relevant information they need to draw up the plan, for example, the pre-construction information (see sub-section 6.1).

173 The client must also ensure that:

- (a) when it is drawn up, the plan adequately addresses the arrangements for managing the risks; and
- (b) the principal contractor (or contractor) regularly reviews and revises the plan to ensure it takes account of any changes that occur as construction progresses and continues to be fit for purpose.

#### *The designer*

174 The designer has no specific duty in relation to the construction phase plan. However, the designer must take all reasonable steps to provide with the design sufficient information about aspects of the design to help contractors (including principal contractors) to comply with their duties. This should include information about the significant risks designers have been unable to eliminate through the design process and the steps designers have taken to reduce or control those risks. They must continue to cooperate with contractors and principal contractors as the construction phase progresses to ensure that they are kept up to date with any design changes.



*The principal designer*

175 The principal designer must help the principal contractor to prepare the construction phase plan by providing any relevant information they hold. This includes:

- (a) the pre-construction information given to them by the client and which they have an important role in pulling together and providing (see sub-section 6.1); and
- (b) any information given to them by designers about the risks that have not been eliminated through the design process and the steps taken to reduce or control those risks.

Before the start of the construction phase, the principal designer should regularly check that the principal contractor has the information needed to prepare the plan. They must continue to liaise with the principal contractor as the construction phase progresses to share any information relevant to the planning and management of the construction phase.

*The principal contractor*

176 For projects involving more than one contractor, the principal contractor must take the lead in preparing, reviewing, updating and revising the construction phase plan. They must draw up the plan or make arrangements for it to be drawn up during the pre-construction phase and **before** the construction site is set up.

177 The principal contractor should expect help from both the client and principal designer in doing this. The client's duty is to ensure that the plan is drawn up and the principal designer's duty is to help the principal contractor by providing any relevant information they hold (see paragraph 175). This information should include:

- (a) the pre-construction information that the client must provide to every designer and contractor involved in the project and which the principal designer will have been involved in preparing; and
- (b) any information provided by designers about the risks that designers have been unable to eliminate through the design process and the steps they have taken to reduce or control them.

The principal contractor must also liaise with the contractors to ensure that the plan takes into account their views on the arrangements for managing the construction phase.

178 Where the plan includes **site rules**, the rules should cover (but not be limited to) topics such as personal protective equipment, parking, use of radios and mobile phones, smoking, restricted areas, hot works and emergency arrangements. The rules should be clear and easily understandable. They should be brought to the attention of everyone on site who should be expected to follow them. The principal contractor should also consider any special requirements, for example, it might be necessary to have translations of the site rules available.

179 The principal contractor must ensure that the construction phase plan is appropriately reviewed, updated and revised from time to time. The plan is a working document and will need to be reviewed regularly enough to address significant changes to the risks involved in the work or in the effectiveness of the controls that have been put in place. This means that



the principal contractor must monitor how effective the plan is in addressing identified risks and whether it is being implemented properly. Ensuring the plan remains fit for purpose must also involve co-operating with:

- (a) the contractors who are most likely to see if the arrangements for controlling safety and health risks are working; and
- (b) the principal designer and designers when changes in designs during the construction phase have implications for the plan.

#### *The contractor*

180 For projects involving more than one contractor, the contractor must follow the parts of the construction phase plan prepared by the principal contractor that are relevant to their work. The contractor should also liaise with the principal contractor to pass on their views on the effectiveness of the plan in managing the risks.

181 For single contractor projects, the contractor has the responsibility for ensuring that a construction phase plan is drawn up. They must either draw up a plan themselves, or make arrangements for it to be drawn up, as soon as practicable **before** setting up the construction site. In preparing the plan they must cooperate with the client and any designers involved in the project and take account of sources of relevant information such as the pre-construction information (see sub-section 6.1).

### 6.3 The safety and health file

182 This sub-section gives guidance on the preparation, provision and retention of a safety and health file and the actions on each dutyholder. Appendix 2 shows how the safety and health file relates to and influences other types of information during a construction project involving more than one contractor.

183 **The safety and health file is only required for projects involving more than one contractor.** It must contain relevant information about the project which should be taken into account when any construction work is carried out on the building **after** the current project has finished. Information included should only be that which is needed to plan and carry out future work safely and without risks to health.

184 The principal designer must prepare the file, and review, update and revise it as the project progresses. If their appointment continues to the end of the project they must also pass the completed file to the client to keep. If the principal designer's appointment finishes before the end of the project, the file must be passed to the principal contractor for the remainder of the project. The principal contractor must then take responsibility for reviewing, updating and revising it and passing it to the client when the project finishes.

#### *What is the safety and health file?*

185 The safety and health file is defined as a file appropriate to the characteristics of the project, containing relevant safety and health information to be taken into account during any subsequent project. **The file is only required for projects involving more than one contractor.**

186 The file must contain information about the current project likely to be needed to ensure safety and health during any subsequent work, such as maintenance, cleaning, refurbishment or demolition. When preparing the safety and health file, information on the following should be considered for inclusion:

- (a) a brief description of the work carried out;
- (b) any hazards that have not been eliminated through the design and construction processes, and how they have been addressed (for example, surveys or other information concerning asbestos or contaminated land);
- (c) key structural principles (for example, bracing, sources of substantial stored energy – including pre- or post-tensioned members) and safe working loads for floors and roofs;
- (d) hazardous materials used (for example, lead paints and special coatings);
- (e) information regarding the removal or dismantling of installed plant and equipment (for example, any special arrangements for lifting such equipment);
- (f) safety and health information about equipment provided for cleaning or maintaining the structure;
- (g) the nature, location and markings of significant services, including underground cables; gas supply equipment; fire-fighting services etc;
- (h) information and as-built drawings of the building, its plant and equipment (for example, the means of safe access to and from service voids and fire doors).

187 There should be enough detail to allow the likely risks to be identified and addressed by those carrying out the work. However, the level of detail should be proportionate to the risks. The file should **not** include things that will be of no help when planning future construction work such as pre-construction information, the construction phase plan, contractual documents, safety method statements etc. Information must be in a convenient form, clear, concise and easily understandable.

### ***What must dutyholders do?***

#### ***The Client***

188 The client must ensure that the principal designer prepares the safety and health file for a project. As the project progresses, the client must ensure that the principal designer regularly updates, reviews and revises the safety and health file to take account of the work and any changes that have occurred. The client should be aware that if the principal designer's appointment finishes before the end of the project, the principal designer must pass the safety and health file to the principal contractor, who then must take on the responsibility for the file.

189 Once the project is finished, the client should expect the principal designer to pass them the safety and health file. In cases where the principal designer has left the project before it finishes, it will be for the principal contractor to pass the file to the client.

190 The client must then retain the file and ensure it is available to anyone who may need it for as long as it is relevant – normally the lifetime of the building – to enable them to comply with safety and health requirements during any subsequent project. It can be kept electronically, on paper, on film, or any other durable form.

191 If a client disposes of their interest in the building, they must give the file to the individual or organisation who takes on the client duties and ensure that the new client is aware of the nature and purpose of the file. If they sell part of a building, any relevant information in the file must be passed or copied to the new owner. If the client leases out all or part of the building, arrangements should be made for the file to be made available to leaseholders. If the leaseholder acts as a client for a future construction project, the leaseholder and the original client must arrange for the file to be made available to the new principal designer.

#### *The designer*

192 Where it is not possible to eliminate safety and health risks when preparing or modifying designs, designers must ensure appropriate information is included in the safety and health file about the reasonably practicable steps they have taken to reduce or control those risks. This will involve liaising with:

- (a) the principal designer, in helping them carry out their duty to prepare, update, review and revise the safety and health file. This should continue for as long as the principal designer's appointment on the project lasts; or
- (b) the principal contractor, where design work is carried out after the principal designer's appointment has finished and where changes need to be made to the safety and health file. In these circumstances, it will be the principal contractor's duty to make those changes, but the designer must ensure that the principal contractor has the appropriate information to update the file.

This information should be provided to the principal designer and principal contractor as early as possible before the designer's work ends on the project.

#### *The principal designer*

193 The principal designer must prepare the safety and health file. They are accountable to the client and should liaise closely to agree the structure and content of the file as soon as practicable after appointment. In preparing the file, the principal designer should expect the client to provide any safety and health file that may exist from an earlier project.

194 The principal designer must also cooperate with the rest of the project team and should expect their cooperation in return. Cooperation with the principal contractor is particularly important in agreeing the structure and content of the information included in the file. Liaison with designers and other contractors is also important. They may hold information that is useful for the safety and health file, which may be difficult to obtain after they have left the project.

195 The principal designer, in cooperation with other members of the project team, must also ensure that the file is appropriately updated, reviewed and revised to ensure it takes account of any changes that occur as the project progresses.

196 The principal designer must pass the updated file to the client at the end of the project. In doing this, they should ensure the client understands the structure and content of the file and its significance for any subsequent project. If the principal designer's appointment finishes before the end of the project, they must pass the file to the

principal contractor who must then take on responsibility for it. In doing this, the principal designer should ensure the principal contractor is aware of any outstanding issues that may need to be taken into account when reviewing, updating and revising the file.

*The principal contractor*

197 For the duration of the principal designer's appointment, the principal contractor plays a secondary role in ensuring the safety and health file is fit for purpose. They must provide the principal designer with any relevant information that needs to be included in the safety and health file.

198 Where the principal designer's appointment finishes before the end of the project, the principal contractor must take on responsibility for ensuring that the file is reviewed, updated and revised for the remainder of the project. At the end of the project the principal contractor must pass the file to the client. In doing this, they should ensure the client understands the structure and content of the file and its significance for any subsequent project.

*The contractor*

199 The contractor has no specific duties placed on them in relation to the safety and health file.

## **7 References**

Managing health and safety in construction, Health and Safety Executive, 2015.

## Appendix

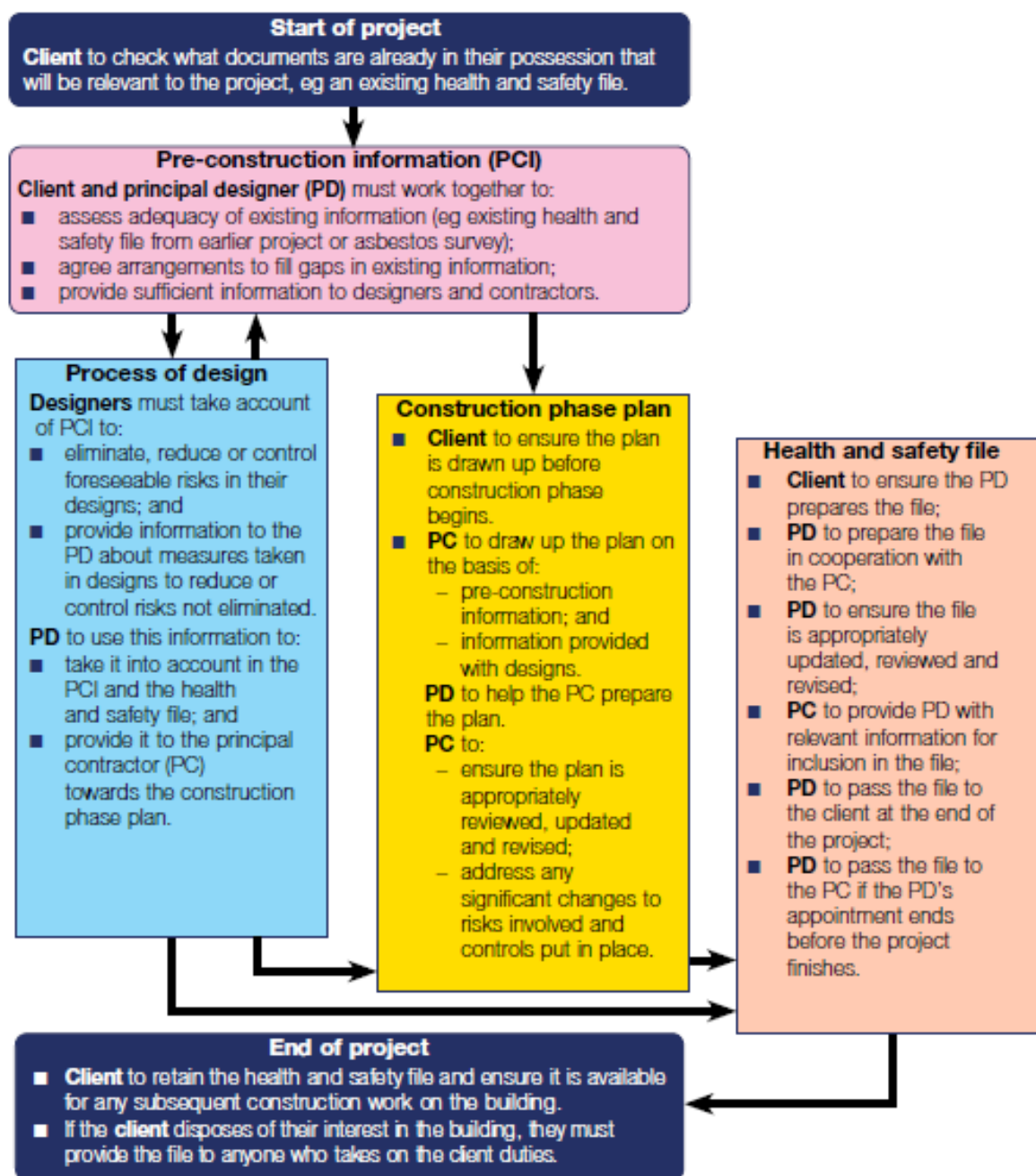
### Appendix 1. General principles of prevention

1 These principles apply to all industries, including construction. They provide a framework to identify and implement measures to control risks on a construction project.

2 The general principles of prevention are to:

- (a) avoid risks;
- (b) evaluate the risks which cannot be avoided;
- (c) combat the risks at source;
- (d) adapt the work to the individual, especially regarding the design of workplaces, the choice of work equipment and the choice of working and production methods, with a view, in particular, to alleviating monotonous work, work at a predetermined work rate and to reducing their effect on health;
- (e) adapt to technical progress;
- (f) replace the dangerous by the non-dangerous or the less dangerous;
- (g) develop a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships and the influence of factors relating to the working environment;
- (h) give collective protective measures priority over individual protective measures; and
- (i) give appropriate instructions to employees.

## Appendix 2. How different types of information relate to and influence each other in a construction project involving more than one contractor: A summary



**Note:** This diagram shows how the various types of information relate to each other and influence the content of other types of information during the construction process (the arrows show the possible different flows of information). So, for example as pre-construction information is developed, this influences the risks designers should consider and the information they provide about how their designs reduce or control foreseeable risks. In turn, this may influence further development of the pre-construction information, as well as the construction phase plan and the health and safety file.

### Appendix 3. Work involving particular risks

- 1 Work which puts workers at risk of burial under earthfalls, engulfment in swampland or falling from a height, 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 site.
- 2 Work which puts workers at risk from chemical or biological substances constituting a particular danger to the safety or health of workers or involving a legal requirement for health monitoring.
- 3 Work with ionizing radiation.
- 4 Work near high voltage power lines.
- 5 Work exposing workers to the risk of drowning.
- 6 Work on wells, underground earthworks and tunnels.
- 7 Work carried out by divers having a system of air supply.
- 8 Work carried out by workers in caissons with a compressed air atmosphere.
- 9 Work involving the use of explosives.
- 10 Work involving the assembly or dismantling of heavy prefabricated components.

## Appendix 4. Minimum welfare facilities required for construction sites

### **Sanitary conveniences**

1 Suitable and sufficient sanitary conveniences must be provided or made available at readily accessible places.

2 Sanitary conveniences must be arranged as follows<sup>9</sup>:

- (a) where 25 males or less: one water closet or latrine and four feet of urinal;
- (b) where more than 25 males but less than 50: two water closets or latrines and eight feet of urinal;
- (c) where more than 50 males but less than 100: three water closets or latrines and 13 feet of urinal;
- (d) where more than 100 males: three water closets or latrines and 13 feet of urinal and an additional water closet or latrine and additional four feet of urinal are provided for every 50 males in excess;
- (e) where 20 females or less: one water closet;
- (f) where more than 20 females: one water closet and one additional water closet is provided for every 20 females in excess.

If this is not possible, a ratio of one toilet to 7 persons is recommended<sup>10</sup>.

3 Closets and urinals in the interior of buildings must be of the water-flush type<sup>11</sup>.

4 Where conditions require, running water, connected to mains water and drainage systems, must be provided for every toilet facility<sup>12</sup>.

5 Toilets facilities must not communicate directly with the actual workplace but must open only on to corridors, halls, landings or courtyards<sup>13</sup>.

6 So far as is reasonably practicable, rooms containing sanitary conveniences must be adequately ventilated and lit<sup>14</sup>.

7 So far as is reasonably practicable, sanitary conveniences and the rooms containing them must be kept in a clean and orderly condition.

8 Separate rooms containing sanitary conveniences must be provided for men and women<sup>15</sup>.

<sup>9</sup>Reg. 33(b), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>10</sup>BS6465-1:2006, Sanitary installations. Code of practice for the design of sanitary facilities and scales of provision of sanitary and associated appliances

<sup>11</sup>Reg. 33(c), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>12</sup>Reg. 33(d), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>13</sup>Reg. 33(e), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>14</sup>Reg. 33(f), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>15</sup>Reg. 37(a), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970



### ***Washing facilities***

9 Suitable and sufficient washing facilities, including showers if required by the nature of the work or for health reasons, must, so far as is reasonably practicable, be provided or made available at readily accessible places.

10 Washing facility must comprise at least one wash-hand basin or equivalent trough of ample size, having a smooth impervious surface and fitted with a waste pipe and plug for every 20 or part of 20 persons employed at any one time<sup>16</sup>.

11 Washing facilities must be provided –

- (a) in the immediate vicinity of every sanitary convenience, whether or not also provided elsewhere; and
- (b) in the vicinity of any changing rooms required by paragraphs 21 to 25, whether or not provided elsewhere.

12 Washing facilities must include –

- (a) a supply of clean water (which must be running water so far as is reasonably practicable);
- (b) soap or other suitable means of cleaning; and
- (c) towels or other suitable means of drying<sup>17</sup>.

13 The floors at all washing facilities must be made of impervious material and shall be properly graded for effective drainage<sup>18</sup>.

14 Rooms containing washing facilities must be sufficiently ventilated and lit.

15 Washing facilities and the rooms containing them must be kept in a clean and orderly condition.

16 Subject to sub-paragraph 17, separate washing facilities must be provided for men and women, except where they are provided in a room the door of which is capable of being secured from inside and the facilities in each room are intended to be used by only one person at a time.

17 Sub-paragraph 16 does not apply to facilities which are provided for washing hands, forearms and the face only.

### ***Drinking water***

18 An adequate supply of clean, safe and wholesome drinking water must be provided or made available at readily accessible and suitable places and must be from a piped main or some other source approved by the Inspector<sup>19</sup>.

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<sup>16</sup>Reg. 36(a), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>17</sup>Reg. 36(a), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>18</sup>Reg. 36(b), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>19</sup>Reg. 34(a), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

19 Where necessary for reasons of safety and health (for example, if the supply of drinking water other than the piped supply), every supply of drinking water must be conspicuously marked by an appropriate sign to indicate that the water is safe for drinking and such supply be renewed daily and all necessary precautions taken to preserve the water and vessels from contamination<sup>20</sup>.

20 Where a supply of drinking water is provided, a sufficient cups or other drinking vessels must also be provided, unless the supply of drinking water is in a jet from which a persons can drink easily. The use of common drinking cups must be prohibited<sup>21</sup>.

### ***Changing rooms and lockers***

21 Suitable and sufficient changing rooms must be provided or made available at readily accessible places if a worker –

- (a) has to wear special clothing (due to exposure to contamination with poisonous, infectious, irritating or radioactive substances) for the purposes of construction work<sup>22</sup>; and
- (b) cannot, for reasons of health or propriety, be expected to change elsewhere.

22 Where necessary for reasons of propriety, there must be separate changing rooms for, or separate use of rooms by, men and women.

23 No such contaminated special clothing shall be worn in premises or areas where meals are being taken<sup>23</sup>.

24 Changing rooms must –

- (a) be provided with seating; and
- (b) include, where necessary, facilities to enable a person to wash and dry any special clothing and any personal clothing or effects<sup>24</sup>.

25 Suitable and sufficient facilities must, where necessary, be provided or made available at readily accessible places to enable persons to lock away –

- (a) any special clothing which is not taken home;
- (b) their own clothing which is not worn during working hours<sup>25</sup>; and
- (c) their personal effects.

### ***Facilities for rest***

26 Suitable and sufficient rest rooms or rest areas must be provided or made available at readily accessible places.

<sup>20</sup>Reg. 34(b), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>21</sup>Regs. 34(c) & (d), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>22</sup>Reg. 33(1)(b), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>23</sup>Reg. 33(1)(c), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>24</sup>Reg. 33(2), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

<sup>25</sup>Reg. 33(1)(a), Factories and Machinery (Safety, Health and Welfare) Regulations, 1970

27 Rest rooms and rest areas must –

- (a) be equipped with an adequate number of tables and adequate seating with backs for the number of persons at work likely to use them at any one time;
- (b) where necessary, include suitable facilities for any woman at work who is pregnant or who is a nursing mother to rest lying down;
- (c) include suitable arrangements to ensure that meals can be prepared and eaten;
- (d) include the means for boiling water; and
- (e) be maintained at an appropriate temperature.

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