Working for Infrastructure

ceca

Construction (Design and Management) Regulations 2015

A good practice guide for the civil engineering sector

www.ceca.co.uk

This 1st edition released April 2016

All information contained herein aim to reflect accepted good practice at the time of publication.

While every effort has been made to ensure accuracy, no responsibility can be accepted for errors, however caused. No responsibility shall be taken for any loss occasioned as a result of material in this guidance is accepted by the authors. Responsibility for interpretation of the material contained in this guidance rests entirely with the user.

CONTENTS

CONTENTS

CONSTRUCTION PHASE PLAN

CONTENTS

ceca

INTRODUCTION


Alasdair Reisner


Alan Muddiman

The Construction (Design & Management) Regulations 2015 (CDM 2015) came into effect on 6th April 2015. The regulations made provision for a transitional period of six months for projects that were already in the construction phase on 6th April 2015, but crucially the Approved Code of Practice (ACoP), which provided supporting guidance for the CDM 2007 regulations, was withdrawn with immediate effect.

During the Consultation period prior to the drafting of the CDM 2015 regulations, the Health & Safety Executive made it clear that they were not intending to produce an ACoP to accompany the revised regulations and they would be looking for industry to provide their own sector specific guidance.

This good practice guide is written by the Civil Engineering Contractors Association (CECA) specifically for the Civil Engineering sector and covers the responsibilities on all parties throughout the life of the project.
This document does not seek to define the differences that exist between the 2007 & 2015 regulations, and the CDM 2015 regulations should be regarded as a new process in it's entirety when referring to this guide.

The Civil Engineering Contractors Association is the representative body for companies who work day-to-day to deliver, upgrade, and maintain the country's infrastructure.

With more than 300 members split across eight regions, CECA represents companies who together carry out an estimated 70-80 per cent of all civil engineering activity in the UK, in the key sectors of transport, energy, communications, waste, water and construction.

CECA are members of the Construction Industry Advisory Committee (CONIAC). The Committee advises the Health and Safety Executive on the protection of people at work (and others) from hazards to health and safety within the building, civil engineering and engineering construction industry.

This document is to be considered a live document, and further examples of good practice would be welcomed. It is intended that this guide will be updated periodically, and future versions will be available in electronic format only from our website (www.ceca.co.uk).

Alasdair Reisner
Chief Executive Officer
Civil Engineering Contractors Association Ltd

Alan Muddiman
Chair,
CECA Health & Safety Forum

ceca

ACKNOWLEDGEMENTS

CECA are indebted to Renew Holdings plc for their assistance in producing this good practice guide, and in particular to Alan Muddiman, Health & Safety Director, and Chair of the CECA Health & Safety Forum; also Tracy Lovell of AMCO for providing the secretariat to the numerous parties who have contributed to the guide.

CECA would also like to thank the Health & Safety Forum for their input, and for sharing the examples of good practice contained in this guide, and in particular:

Brian Goodacre	Harry Fairclough ltd;
Stuart Losing	VHE & Seymour Civil Engineering;
Phil Beaumont	Colas Ltd;
Robert Bradford	Balfour Beatty;
Roy Jackson	BAM Nuttall.

Finally, CECA would like to thank the following for their assistance in drafting this guide:

Bob Lorenzo	Trustee	Yorkshire Safety Centre for the Construction Industry
Frank Mann	Trustee	Yorkshire Safety Centre for the Construction Industry
Mark Roper	Executive Director	CECA Yorkshire & Humberside;
Peter Crosland	Civil Engineering Director	CECA Ltd;
William Cowie	Designer	Cairn Cross Solutions Ltd.

ceca

GUIDE ON USE

This guide looks critically at each regulation contained in CDM 2015, and is written to reflect what must be done to gain compliance, and what should and could be done to demonstrate good practice.

Must is what the law requires and each regulation, or part of, is printed in **black**. This must be treated as the minimum standard to be achieved, and is not a target.

Actions that **should** be done are printed in **blue**. This is a good practice standard that most individuals and employers can achieve.

What **could** be done is printed in **green** and challenges the user to aspire to good practice.

Any text printed in **pink** is guidance taken from the HSE document titled Managing health & safety in construction, reference L153, published in 2015.

The guide does not seek to follow the Regulations in numerical order, rather in the order they need to be addressed following a typical contract programme through the life of a project. This is designed to allow checks on compliance as programme items approach.

The images contained in the header of each page signify the Duty holders are represented graphically and the colour codes used on the helmets & waistcoats are replicated in the programme shown below.

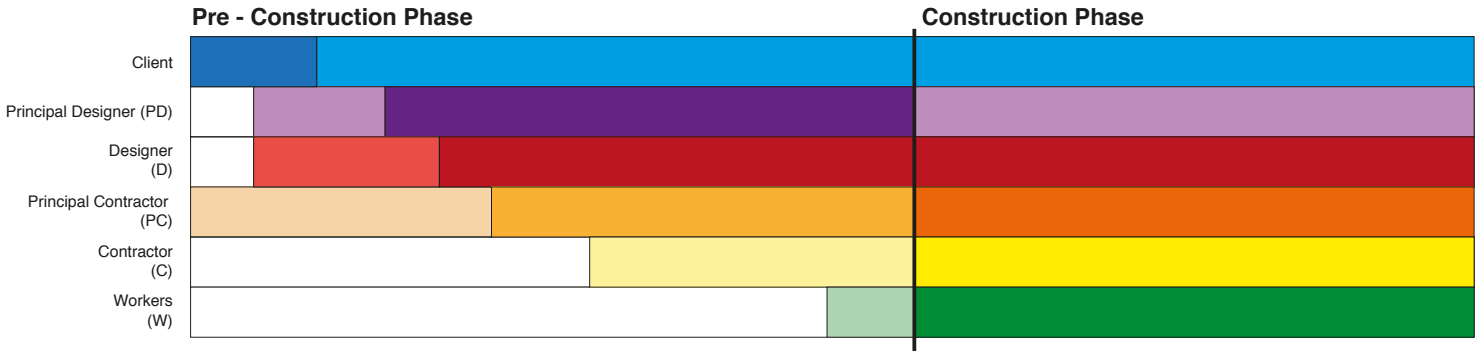
- **Blue** signifies the Client;
- **Purple** signifies the Principal Designer;
- **Red** signifies the Designer;
- **Orange** signifies the Principal Contractor;
- **Yellow** signifies the Contractor; and
- **Green** signifies the Workers.

They move in and out depending on their input at that stage of the programme.
Examples of good practice are taken from projects where CECA members were involved. Guidance used or available is listed in italics and in the electronic version of the document provide a hyperlink where there is free access.

Construction (Design and Management) Regulations 2015

A good practice guide for the civil engineering sector

Citation and commencement



These Regulations may be cited as the Construction (Design and Management) Regulations 2015 and come into force on 6th April 2015 immediately after the Mines Regulations 2014.

The Regulations come into force on 6 April 2015 and replace CDM 2007.

The Regulations are subject to certain transitional provisions which recognise there will be projects that started before CDM 2015 comes into force. Guidance on these is set out in paragraphs 181-186, and, in particular, recognise that any CDM co-ordinator appointed under CDM 2007 may continue to carry out the duties they had under CDM 2007 for up to 6 months after CDM 2015 comes into force. This will allow a Principal Designer to be appointed and replace the CDM co-ordinator within that period.

Guidance:
L153 - Managing Health & Safety in Construction
http://www.hse.gov.uk/pubns/priced/l153.pdf

REGULATION

2

Interpretation

(1) In these Regulations—

"the 1974 Act" means the Health and Safety at Work etc. Act 1974;
"the 2007 Regulations" means the Construction (Design and Management) Regulations 2007;
"the Management Regulations" means the Management of Health and Safety at Work Regulations 1999;
"business" means a trade, business or other undertaking (whether for profit or not);
"Client" means any person for whom a project is carried out;
"construction phase" means the period of time beginning when construction work in a project starts and ending when construction work in that project is completed;
"construction phase plan" means a plan drawn up under regulations 12 or 15;
"construction site" includes any place where construction work is being carried out or to which the Workers have access, but does not include a workplace within the site which is set aside for purposes other than construction work;
"construction work" means the carrying out of any building, civil engineering or engineering construction work and includes—

(a) the construction, alteration, conversion, fitting out, commissioning, renovation, repair, upkeep, redecoration or other maintenance (including cleaning which involves the use of water or an abrasive at high pressure, or the use of corrosive or toxic substances), de-commissioning, demolition or dismantling of a structure;

(b) the preparation for an intended structure, including site clearance, exploration, investigation (but not site survey) and excavation (but not pre-construction archaeological investigations), and the clearance or preparation of the site or structure for use or occupation at its conclusion;

(c) the assembly on site of prefabricated elements to form a structure or the disassembly on site of the prefabricated elements which, immediately before such disassembly, formed a structure;

(d) the removal of a structure, or of any product or waste resulting from demolition or dismantling of a structure, or from disassembly of prefabricated elements which immediately before such disassembly formed such a structure;

(e) the installation, commissioning, maintenance, repair or removal of mechanical, electrical, gas, compressed air, hydraulic, telecommunications, computer or similar services which are normally fixed within or to a structure,

but does not include the exploration for, or extraction of, mineral resources, or preparatory activities carried out at a place where such exploration or extraction is carried out;

"Contractor" means any person (including a non-domestic Client) who, in the course or furtherance of a business, carries out, manages or controls construction work;

"design" includes drawings, design details, specifications and bills of quantities (including specification of articles or substances) relating to a structure, and calculations prepared for the purpose of a design;

"Designer" means any person (including a Client, Contractor or other person referred to in these Regulations) who in the course or furtherance of a business—
(a) prepares or modifies a design; or
(b) arranges for, or instructs, any person 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;

"domestic Client" means a Client for whom a project is being carried out which is not in the course or furtherance of a business of that Client;

"excavation" includes any earthwork, trench, well, shaft, tunnel or underground working;

"the general principles of prevention" means the general principles of prevention specified in Schedule 1 to the Management Regulations;

"health and safety file" means a file prepared under regulation 12(5);

Guidance:
L153 - Managing Health & Safety in Construction
http://www.hse.gov.uk/pubns/priced/l153.pdf

"inspector for the Executive" means an inspector within the meaning given in section 53(1) of the 1974 Act;

"loading bay" means any facility for loading or unloading;

"place of work" means any place which is used by any person at work for the purposes of construction work or for the purposes of any activity arising out of or in connection with construction work;

"pre-construction information" means information in the Client's possession or which is reasonably obtainable by or on behalf of the Client, which is relevant to the construction work and is of an appropriate level of detail and proportionate to the risks involved, including—

(a) Information about—
(i) the project;
(ii) planning and management of the project;
(iii) health and safety hazards, including design and construction hazards and how they will be addressed; and
(b) information in any existing health and safety file;

"pre-construction phase" means any period of time during which design or preparatory work is carried out for a project and may continue during the construction phase;

"Principal Contractor" means the Contractor appointed under regulation 5(1)(b) to perform specified duties in regulations 12 to 14;

"Principal Designer" means the Designer appointed under regulation 5(1)(a) to perform specified duties in regulations 11 and 12;

"project" means a project which includes or is intended to include construction work and includes all planning, design, management or other work involved in a project until the end of the construction phase;

"site rules" means rules which are drawn up for a particular construction site and are necessary for health or safety purposes;

"structure" means—
(a) any building, timber, masonry, metal or reinforced concrete structure, railway line or siding, tramway line, dock, harbour, inland navigation, tunnel, shaft, bridge, viaduct, waterworks, reservoir, pipe or pipeline, cable, aqueduct, sewer, sewage works, gasholder, road, airfield, sea defence works, river works, drainage works, earthworks, lagoon, dam,
(b) wall, caisson, mast, tower, pylon, underground tank, earth retaining structure or structure designed to preserve or alter any natural feature, and fixed plant;
(c) any structure similar to anything specified in paragraph (a);
(d) any formwork, falsework, scaffold or other structure designed or used to provide support or means of access during construction work, and any reference to a structure includes part of a structure;

"traffic route" means a route for pedestrian traffic or for vehicles and includes any doorway, gateway, loading bay or ramp;

"vehicle" includes any mobile work equipment;

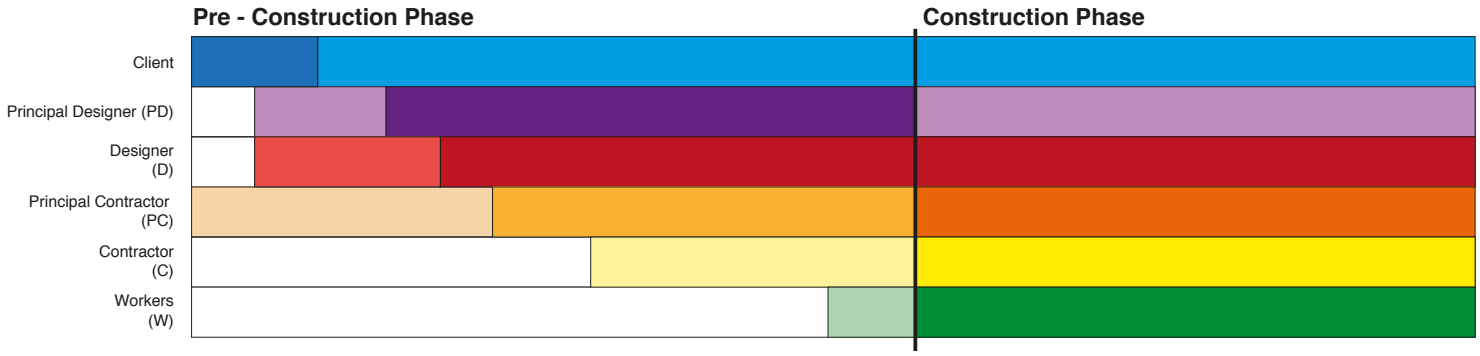
"work equipment" means any machinery, appliance, apparatus, tool or installation for use at work (whether exclusively or not);

"working day" means any day on which construction work takes place;

"workplace" means a workplace within the meaning of regulation 2(1) of the Workplace (Health, Safety and Welfare) Regulations 1992 other than a construction site.

(2) Any reference in these Regulations to a plan, rule, document, report or copy includes a copy or electronic version which is —
(a) capable of being retrieved or reproduced when required; and
(b) secure from loss or unauthorised interference.

REGULATION 3



(1) —These Regulations apply—

(a) in Great Britain; and

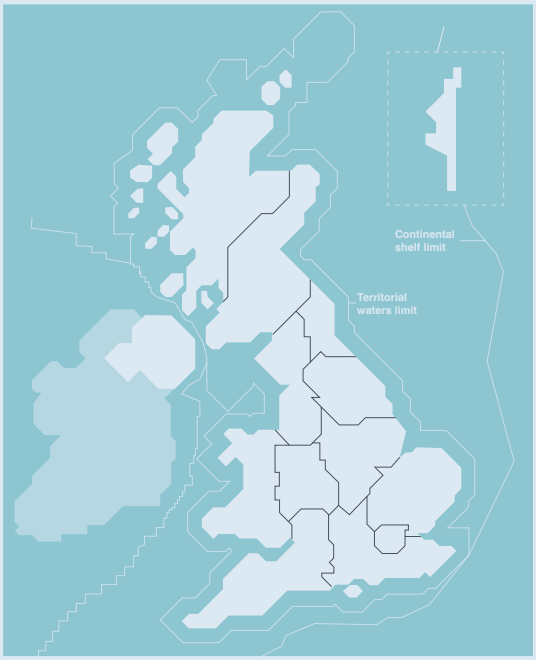
(b) to premises and activities outside Great Britain to which sections 1 to 59 and 80 to 82 of the 1974 Act apply by virtue of articles 9 and 11(1)(a) of the Health and Safety at Work etc. Act 1974 (Application outside Great Britain) Order 2013.

CDM 2015 applies to all construction projects in Great Britain. Through the Health and Safety at Work etc. Act 1974 (Application outside Great Britain) Order 2013, it also applies to construction work carried out in:

a) the territorial sea; and

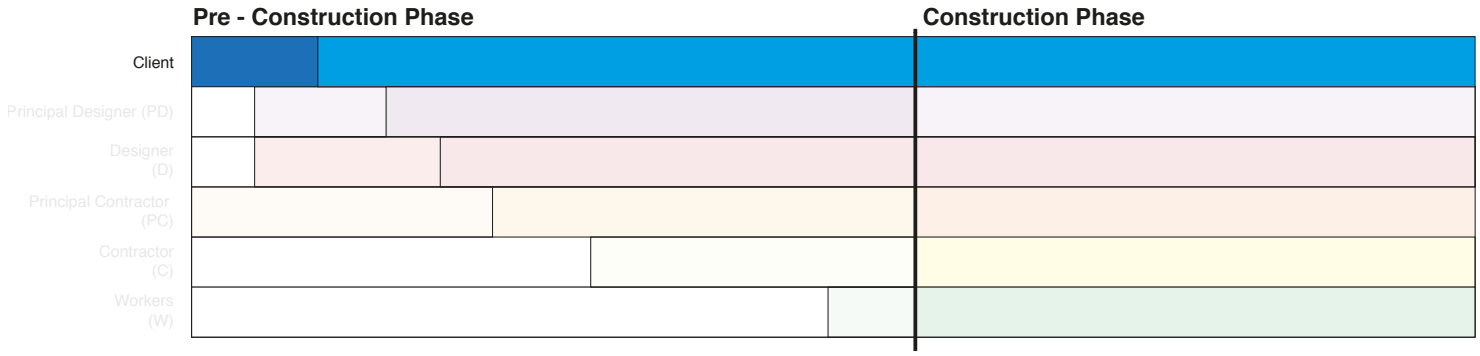
b) connection with, or preparatory to, construction of any renewable energy structure in the renewable energy zone.

With the exception of Part 4, the Regulations apply to construction projects as a whole – that is, the whole construction process from concept to completion. Part 4 sets out a number of provisions that only relate to work carried out on construction sites.



Guidance:
L153 - Managing Health & Safety in Construction
http://www.hse.gov.uk/pubns/priced/l153.pdf

Application to domestic Clients



(1) Where the Client is a domestic Client the duties in regulations 4(1) to (7) and 6 must be carried out by—
(a) the Contractor for a project where there is only one Contractor;
(b) the Principal Contractor for a project where there is more than one Contractor; or
(c) the Principal Designer where there is a written agreement that the Principal Designer will fulfil those duties.

(2) If a domestic Client fails to make the appointments required by regulation 5—
(a) the Designer in control of the pre-construction phase of the project is the Principal Designer;
(b) the Contractor in control of the construction phase of the project is the Principal Contractor.

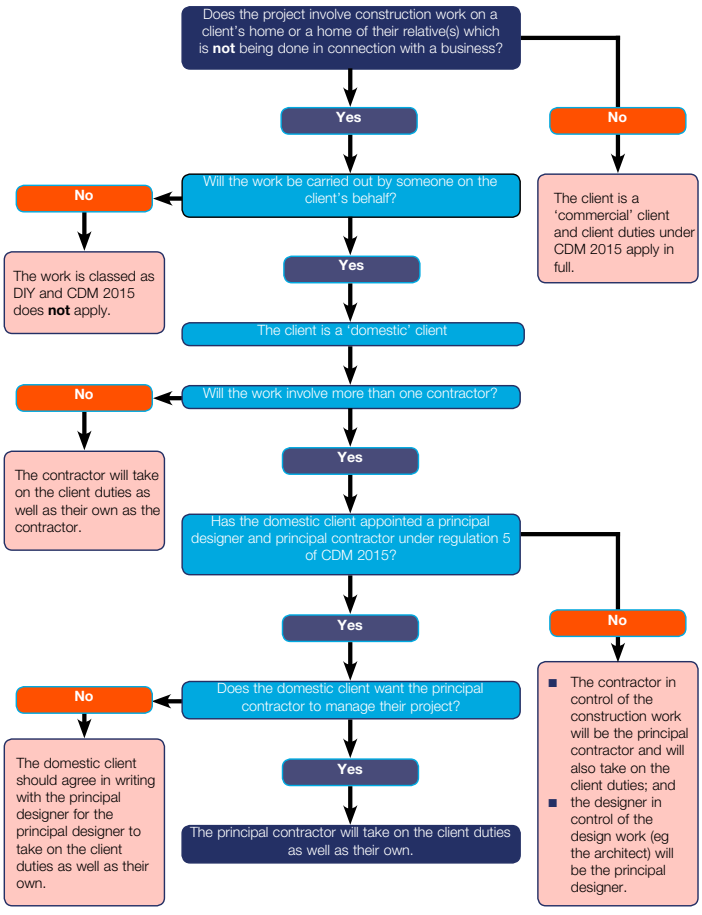
(3) Regulation 5(3) and (4) does not apply to a domestic Client.

Should
As there is no limit on size, value or duration of domestic projects Clients should consider what the best options for procuring large projects are.

Could
Domestic Clients on large domestic projects could seek advice from Designers and Contractors.

Good Practice

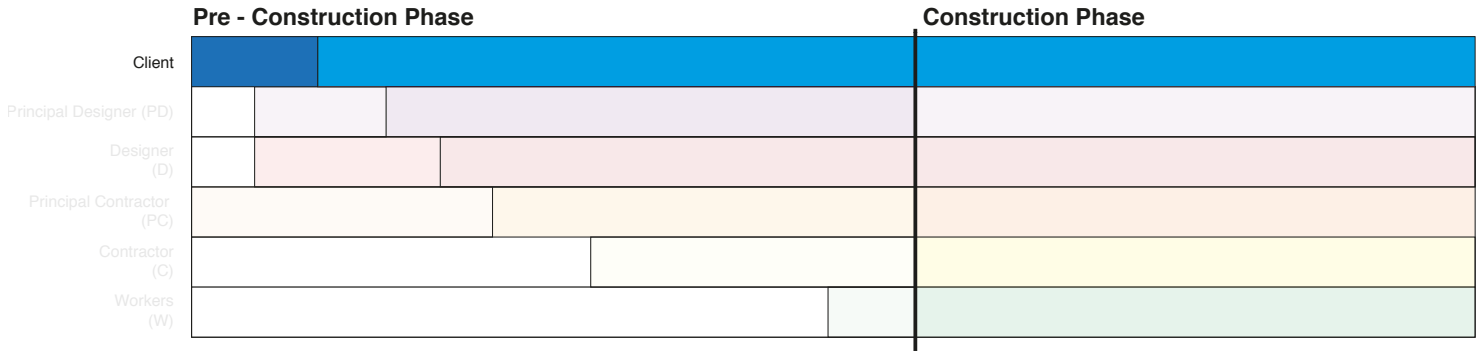
On this project the Client duties were carried out by the Contractor who also procured the design. The Client used the CITB wizard app to help them through the process.



Guidance:
CDM Wizard App.
http://www.citb.co.uk/health-safety-and-other-topics/health-safety/construction-design-and-management-regulations/cdm-wizard-app/
L153 - Managing Health and Safety in Construction - http://www.hse.gov.uk/pubns/priced/l153.pdf

REGULATION 4 (1 & 2)

Client duties for managing projects



(1) A Client must make suitable arrangements for managing a project, including the allocation of sufficient time and other resources.

(2) Arrangements are suitable if they ensure that—

(a) the construction work can be carried out, so far as is reasonably practicable, without risks to the health or safety of any person affected by the project; and

(b) the facilities required by Schedule 2 are provided in respect of any person carrying out construction work.

Should

Client should consider the best options for procurement of the project and who in the team is best placed to give advice during both the pre-construction and construction phases.

Could

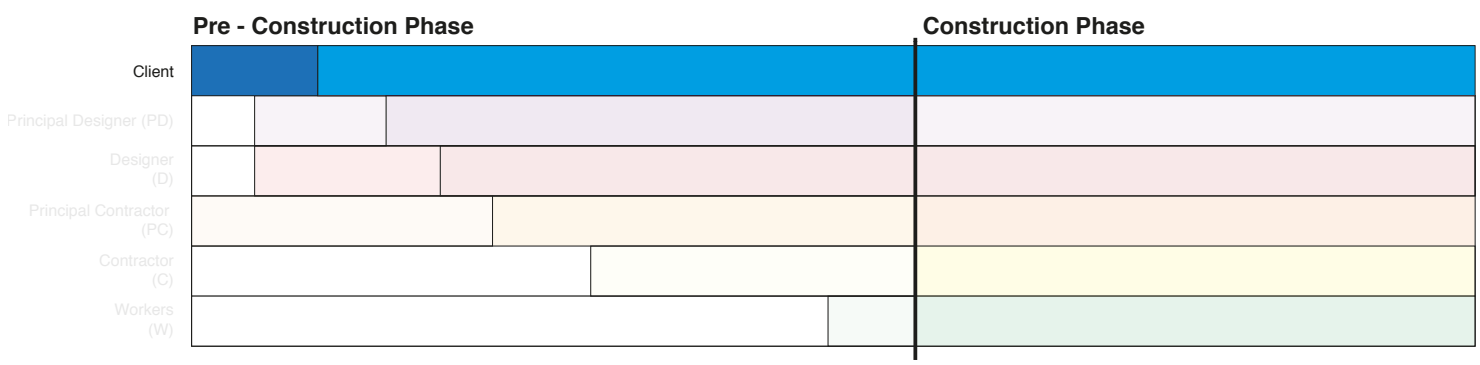
Client could take the opportunity to test his concept with potential Principal Designer and Principal Contractor before progressing. Client could decide to combine the Principal Designer and Principal Contractor appointments on design and construction contracts.

Good Practice

On this scheme the Client organised an early site visit with the team where all parties could discuss the best way to proceed.

Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

Client duties for managing projects



(3) A Client must ensure that these arrangements are maintained and reviewed throughout the project.

Should
Client should be careful not to introduce additional organisations to oversee this function. Review process should use existing duty holders and not confuse existing flows of information.

Could
Client could use progress meetings as the base for review, this would make this an ongoing process rather than audit. Once in the construction phase the Client could tap into the workforce as an additional check on how the project is being managed.

Good Practice

On a complex rail tunnel refurbishment project the Client, Designer, and Principal Contractor conducted joint inspections of the site on a weekly basis to check that arrangements were maintained.

Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

REGULATION

5 (1, 2, 3 & 4)

Appointment of the Principal Designer and the Principal Contractor

(1) Where there is more than one Contractor, or if it is reasonably foreseeable that more than one Contractor will be working on a project at any time, the Client must appoint in writing—

(a) a Designer with control over the pre-construction phase as Principal Designer; and

(b) a Contractor as Principal Contractor.

(2) The appointments must be made as soon as is practicable, and in any event, before the construction phase begins.

(3) If the Client fails to appoint a Principal Designer, the Client must fulfil the duties of the Principal Designer in regulations 11 and 12.

(4) If the Client fails to appoint a Principal Contractor, the Client must fulfil the duties of the Principal Contractor in regulations12 to 14.

Should

Client should consider carefully who he will appoint and should explore the variables which will give him the best team to deliver the project safely.

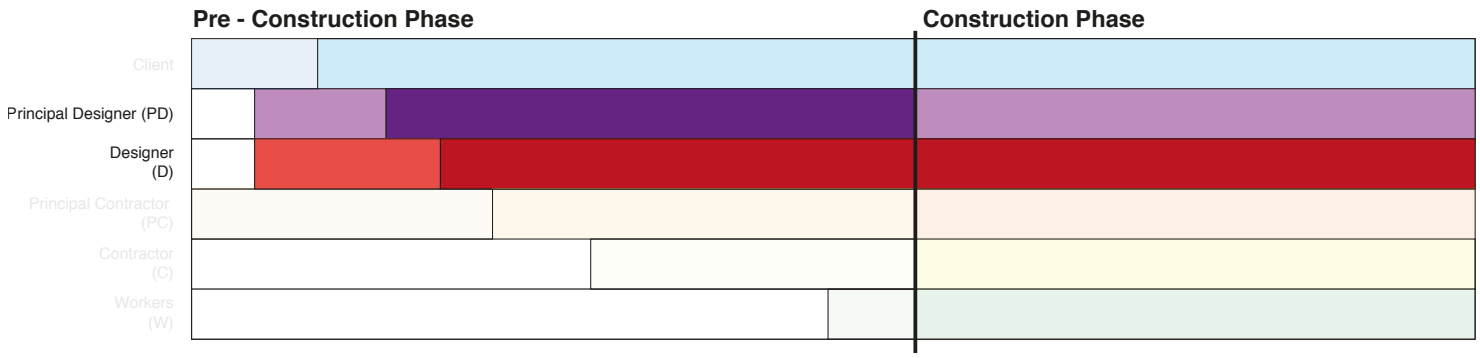
Could

The Client could consider a more team based approach with early appointments giving him the advantage of the skills and experience of both design and construction working together for the benefit of the project.

Good Practice

This is an example of where Client choice and appointments delivered a project that won the 'Civil Engineering Achievement of the Year' Award at the National Rail awards.

Duties of Designers



Check Clients awareness

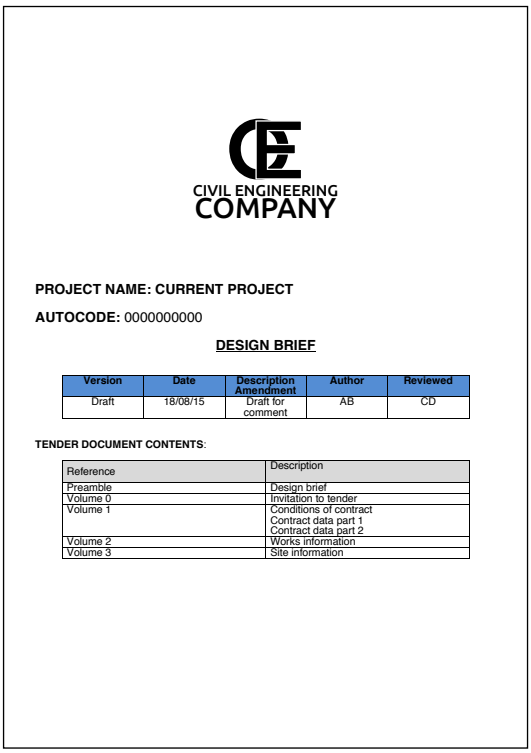
(1) A Designer must not commence work in relation to a project unless satisfied that the Client is aware of the duties owed by the Client under these Regulations.

Should
Designers should check that Clients understand the key phases of a construction project. This may be demonstrated through appointment documentation.

Could
Designers could use this key stage to map out a programme with significant dates and appointments needed.

Good Practice

The Designer found enough in the design brief to satisfy them that the Client is aware of their duties.



CIVIL ENGINEERING COMPANY

PROJECT NAME: CURRENT PROJECT

AUTOCODE: 0000000000

DESIGN BRIEF

Version	Date	Description Amendment	Author	Reviewed
Draft	18/08/15	Draft for comment	AB	CD

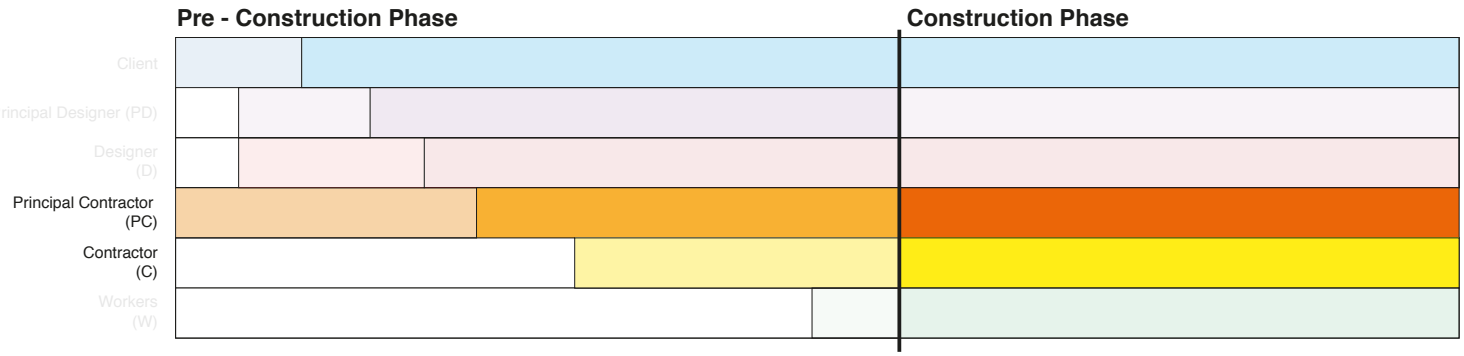
TENDER DOCUMENT CONTENTS:

Reference	Description
Preamble	Design brief
Volume 0	Invitation to tender
Volume 1	Conditions of contract Contract data part 1 Contract data part 2
Volume 2	Works information
Volume 3	Site information

Guidance:
Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Designers.htm
L153 - Managing Health & Safety in Construction - http://www.hse.gov.uk/pubns/priced/l153.pdf

REGULATION 15 (1)

Duties of Contractors



Client awareness

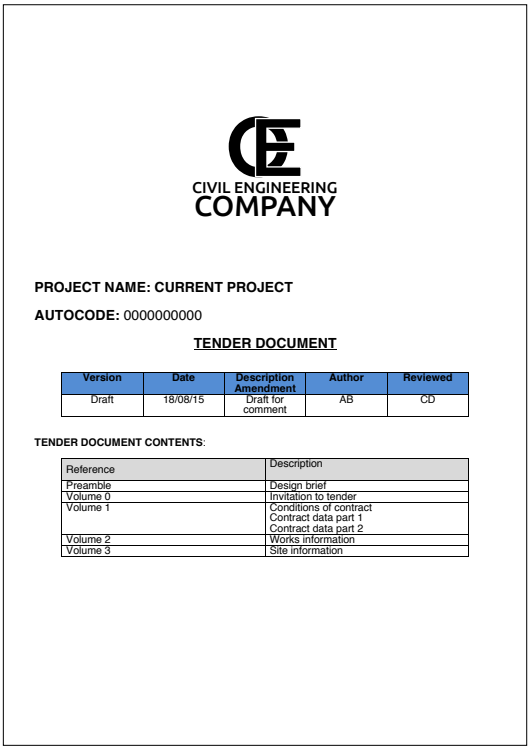
(1) A Contractor must not carry out construction work in relation to a project unless satisfied that the Client is aware of the duties owed by the Client under these Regulations.

Should
Contractors should be able to ascertain Client knowledge by correspondence and documentation received.

Could
Contractors could make Client aware or recommend a training provider.

Good Practice

A Contractor may be satisfied that the Client was aware of his duties after studying the relevant tender documentation.



CIVIL ENGINEERING COMPANY

PROJECT NAME: CURRENT PROJECT

AUTOCODE: 0000000000

TENDER DOCUMENT

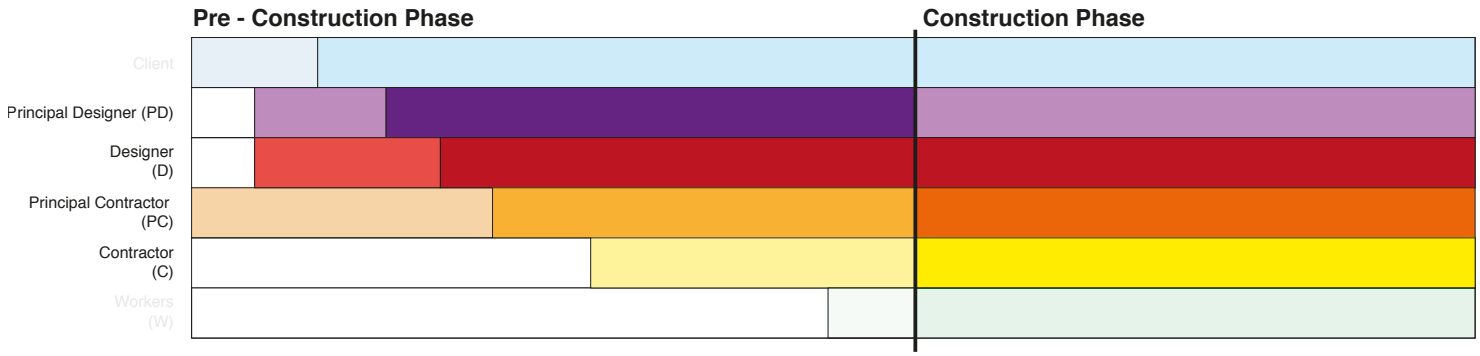
Version	Date	Description Amendment	Author	Reviewed
Draft	18/08/15	Draft for comment	AB	CD

TENDER DOCUMENT CONTENTS:

Reference	Description
Preamble	Design brief
Volume 0	Invitation to tender
Volume 1	Conditions of contract Contract data part 1 Contract data part 2
Volume 2	Works information
Volume 3	Site information

Guidance:
Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Designers.htm
L153 - Managing Health & Safety in Construction - http://www.hse.gov.uk/pubns/priced/l153.pdf

General Duties



Skills, knowledge and experience

(1) A Designer (including a Principal Designer) or Contractor (including a Principal Contractor) appointed to work on a project must have the skills, knowledge and experience and, if they are an organisation, the organisational capability, necessary to fulfil the role that they are appointed to undertake, in a manner that secures the health and safety of any person affected by the project.

Acceptance of appointments

(2) A Designer or Contractor must not accept an appointment to a project unless they fulfil the conditions in paragraph (1).

Should
Organisations should be realistic about their capabilities and not accept appointments they are not comfortable with.

Could
Duty holders could supplement their team to fill gaps but this does not always work if there are major gaps they are trying to fill.

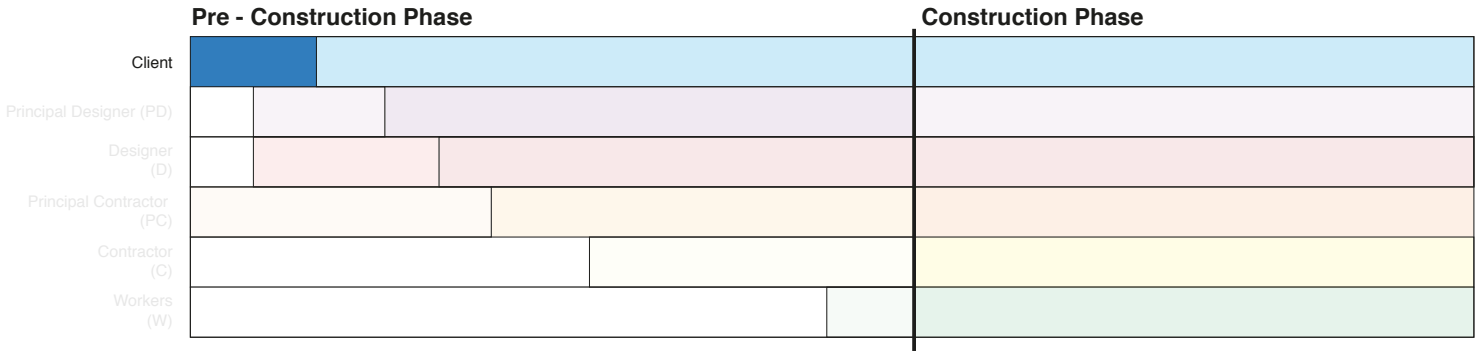
Good Practice

Duty holders could supplement their teams internally as and when required; however, if a duty holder does not have the required skills within their own organisation then third parties could be utilised.

Guidance:
Summary of duties under CDM Regulations 2015 - http://www.hse.gov.uk/construction/cdm/2015/summary.htm

REGULATION 6 (1)

Notification



(1) A project is notifiable if the construction work on a construction site is scheduled to—

(a) last longer than 30 working days and have more than 20 Workers working simultaneously at any point in the project; or

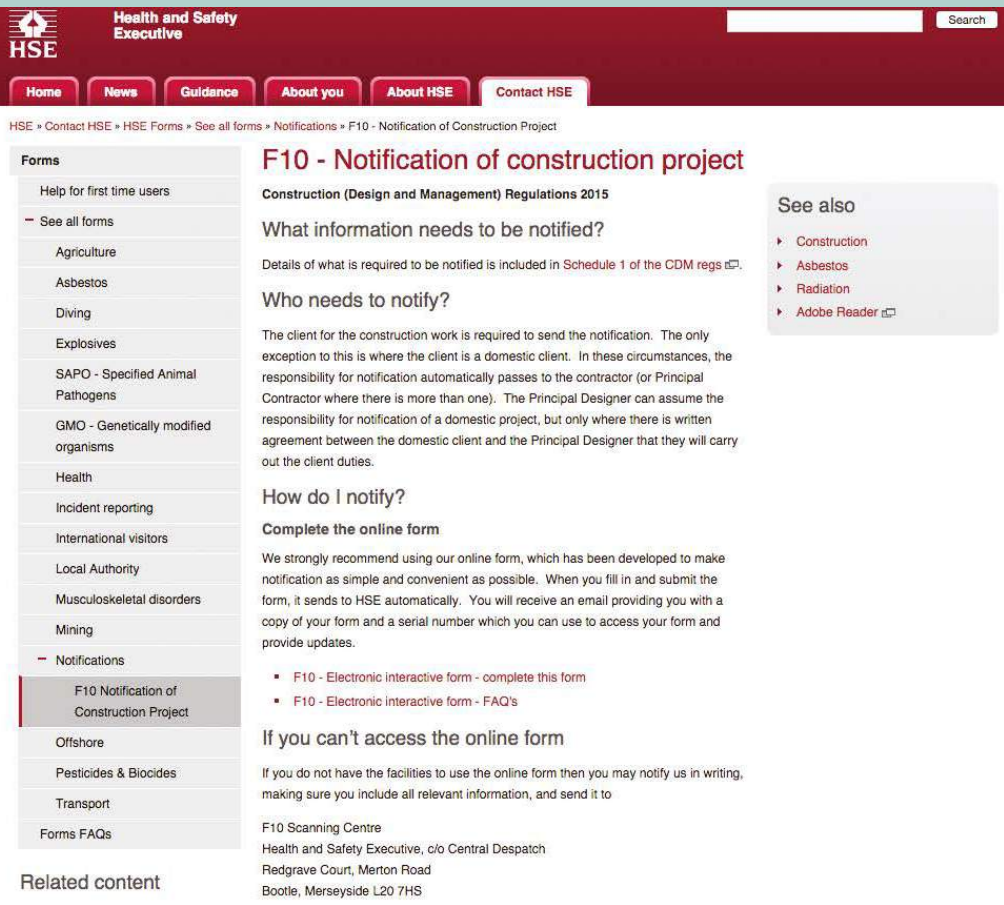
(b) exceed 500 person days.

Should

Client should check who the enforcing authority is before giving notice.

Could

Client could seek advice from Principal Designer or Principal Contractor if needed.



HSE Health and Safety Executive

Search

Home | News | Guidance | About you | About HSE | Contact HSE

HSE » Contact HSE » HSE Forms » See all forms » Notifications » F10 - Notification of Construction Project

Forms

- Help for first time users
- See all forms
  - Agriculture
  - Asbestos
  - Diving
  - Explosives
  - SAPO - Specified Animal Pathogens
  - GMO - Genetically modified organisms
  - Health
  - Incident reporting
  - International visitors
  - Local Authority
  - Musculoskeletal disorders
  - Mining
  - Notifications
    - F10 Notification of Construction Project
  - Offshore
  - Pesticides & Biocides
  - Transport
- Forms FAQs

Related content

F10 - Notification of construction project

Construction (Design and Management) Regulations 2015

What information needs to be notified?

Details of what is required to be notified is included in Schedule 1 of the CDM regs.

Who needs to notify?

The client for the construction work is required to send the notification. The only exception to this is where the client is a domestic client. In these circumstances, the responsibility for notification automatically passes to the contractor (or Principal Contractor where there is more than one). The Principal Designer can assume the responsibility for notification of a domestic project, but only where there is written agreement between the domestic client and the Principal Designer that they will carry out the client duties.

How do I notify?

Complete the online form

We strongly recommend using our online form, which has been developed to make notification as simple and convenient as possible. When you fill in and submit the form, it sends to HSE automatically. You will receive an email providing you with a copy of your form and a serial number which you can use to access your form and provide updates.

- F10 - Electronic interactive form - complete this form
- F10 - Electronic interactive form - FAQ's

If you can't access the online form

If you do not have the facilities to use the online form then you may notify us in writing, making sure you include all relevant information, and send it to

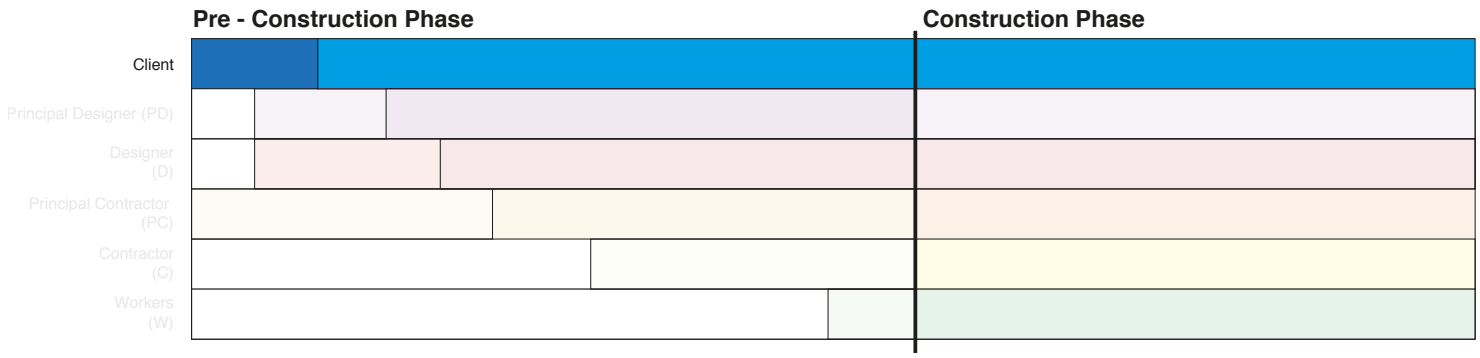
F10 Scanning Centre
Health and Safety Executive, c/o Central Despatch
Redgrave Court, Merton Road
Bootle, Merseyside L20 7HS

See also

- Construction
- Asbestos
- Radiation
- Adobe Reader

Guidance:
Notification of construction project
https://www.hse.gov.uk/forms/notification/f10.htm

Notification

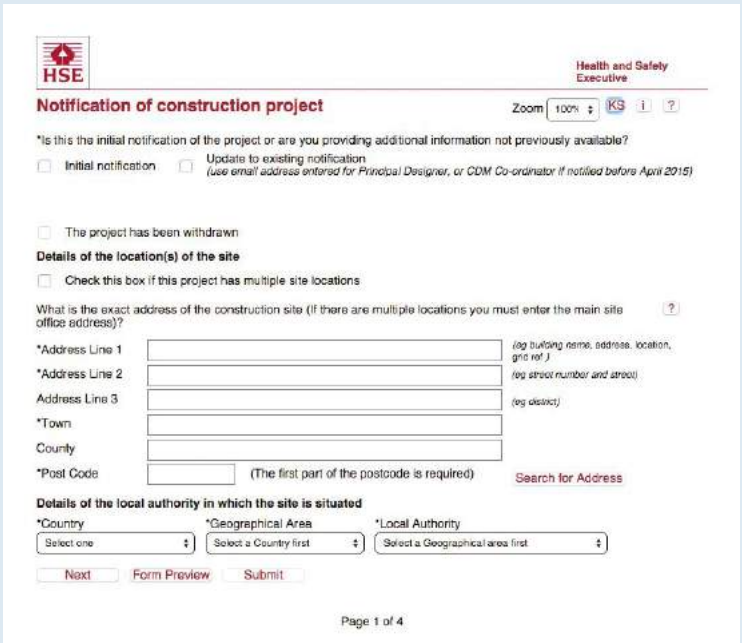


(2) Where a project is notifiable, the Client must give notice in writing to the Executive as soon as is practicable before the construction phase begins.

(3) The notice must—
(a) contain the particulars specified in Schedule 1;
(b) be clearly displayed in the construction site office in a comprehensible form where it can be read by any Worker engaged in the construction work; and
(c) if necessary, be periodically updated.

(4) Where a project includes construction work of a description for which the Office of Rail Regulation is the enforcing authority by virtue of regulation 3 of the Health and Safety (Enforcing Authority or Railways and Other Guided Transport Systems) Regulations 2006, the Client must give notice to the Office of Rail Regulation instead of the Executive.

(5) Where a project includes construction work on premises which are or are on—
(a) a GB nuclear site (within the meaning given in section 68 of the Energy Act 2013);
(b) an authorised defence site (within the meaning given in regulation 2(1) or the Health and Safety (Enforcing Authority) Regulations 1998); or
(c) a new nuclear build site (within the meaning given in regulation 2A of those
(d) Regulations), the Client must give notice to the Office for Nuclear Regulation instead of the Executive.



HSE Health and Safety Executive

Notification of construction project

Zoom 100% KS

*Is this the initial notification of the project or are you providing additional information not previously available?

Initial notification Update to existing notification
(use email address entered for Principal Designer, or CDM Co-ordinator if notified before April 2015)

The project has been withdrawn

Details of the location(s) of the site

Check this box if this project has multiple site locations

What is the exact address of the construction site (If there are multiple locations you must enter the main site office address)?

*Address Line 1 (eg building name, address, location, grid ref.)
*Address Line 2 (eg street number and street)
Address Line 3 (eg district)
*Town
County
*Post Code (The first part of the postcode is required) Search for Address

Details of the local authority in which the site is situated

*Country: Select one
*Geographical Area: Select a Country first
*Local Authority: Select a Geographical area first

Next Form Preview Submit

Page 1 of 4

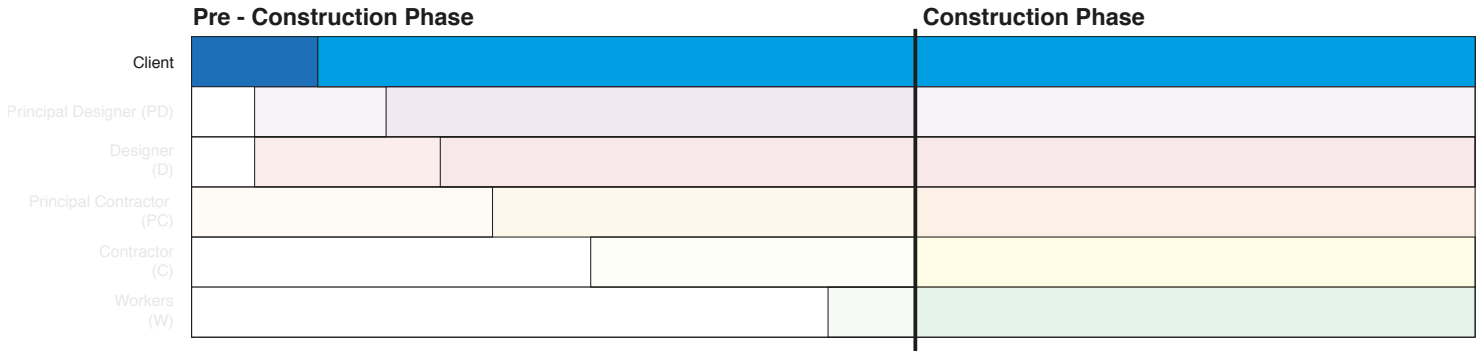
The Client for the construction work is required to send the notification. The only exception to this is where the Client is a domestic Client. In these circumstances, the responsibility for notification automatically passes to the Contractor (or Principal Contractor where there is more than one). The Principal Designer can assume the responsibility for notification of a domestic project, but only where there is written agreement between the domestic Client and the Principal Designer that they will carry out the Client duties.

Guidance:
Notification of construction project
https://www.hse.gov.uk/forms/notification/f10.pdf

REGULATION

4 (6)

Client duties for managing projects



Principal Designer and Principal Contractor compliance

(6) A Client must take reasonable steps to ensure that—
(a) the Principal Designer complies with any other Principal Designer duties in regulations 11 and 12; and
(b) the Principal Contractor complies with any other Principal Contractor duties in regulations 12 to 14;

Should
Client should be seen as part of the team, keep up to speed with the process and review compliance.

Could
Client could structure his responsibilities as part of a team review where he could view progress against key targets. Client could dispense with external verification if he has the right team in place who are prepared to share H&S support.

Good Practice

On a high profile reactive project early Contractor involvement allowed the Client and Designers access to the Principal Contractors expertise when discussing methodology.

Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

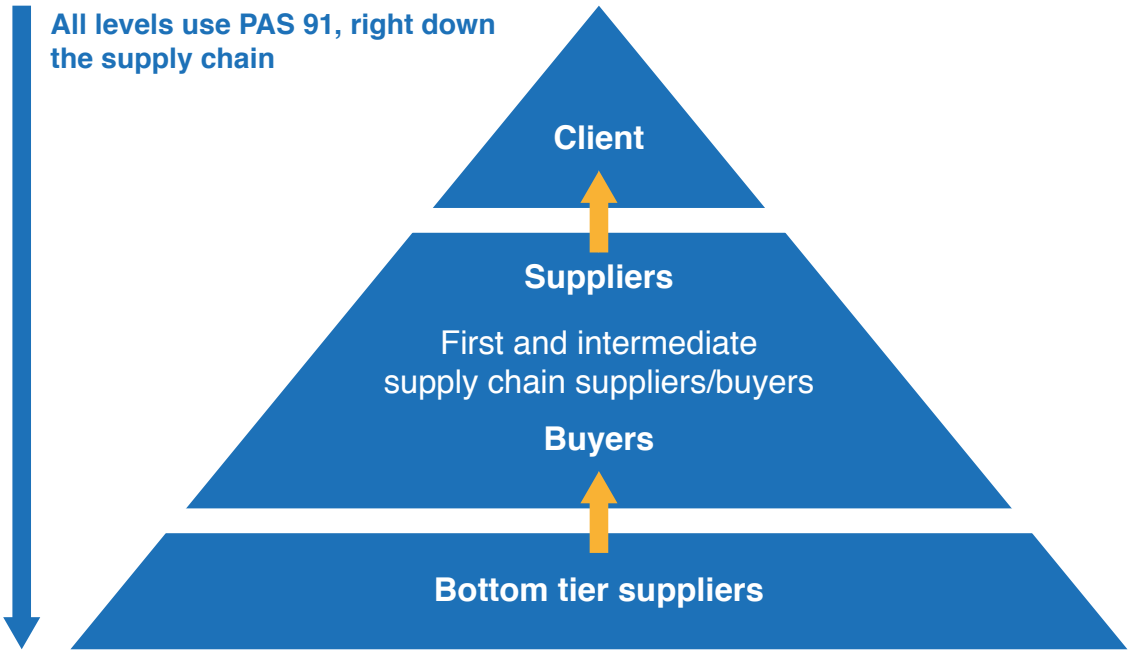
General Duties

Checks on skills etc.

(3) A person who is responsible for appointing a Designer or Contractor to carry out work on a project must take reasonable steps to satisfy themselves that the Designer or Contractor fulfils the conditions in paragraph (1).

Should
Those making appointments and needing company information should follow HSE guidance which recommends the use of Publicly Available Specification 91, 2013 (PAS91) and reduce the time spent completing many different PQQ documents.

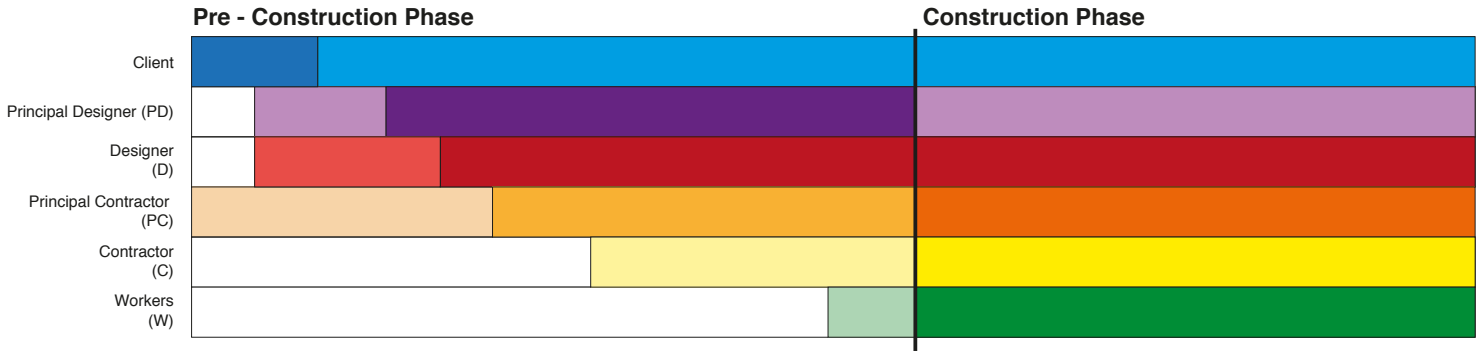
Could
Those appointing could get more of an insight by visiting existing projects rather than relying on documentation.



Guidance:
Publicly Available Specification 91, 2013 (PAS91) - http://shop.bsigroup.com/upload/PASs/PAS91-2013.pdf
Summary of duties under CDM Regulations 2015 - http://www.hse.gov.uk/construction/cdm/2015/summary.htm

REGULATION 8(5)

General Duties



Reporting danger

(5) A person working on a project under the control of another must report to that person anything they are aware of in relation to the project which is likely to endanger their own health or safety or that of others.

Should

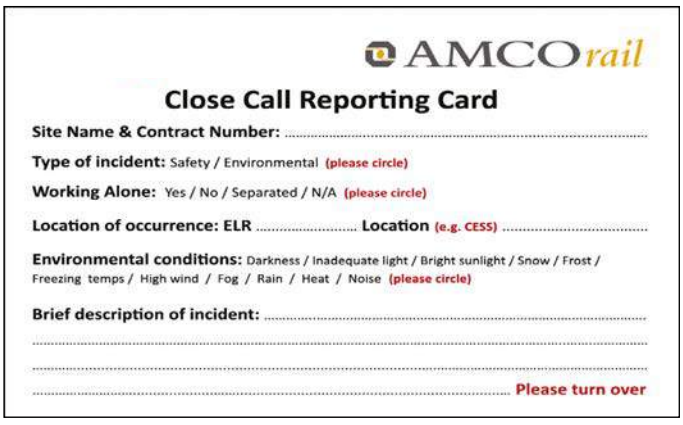
Employers should have systems in place which allow their employees to report danger, the system should allow for rapid transfer of information if the employer does not have control of the activity.

Could

Duty holders could cooperate to put in place systems for reporting both good and bad practice. Risks could be addressed rapidly and good practice can be recorded for use on future projects.

Good Practice

A simple, and potentially anonymous system for reporting near-miss incidents, is a very important way of identifying problem areas. This will help you highlight some of the less obvious hazards in a workplace, or identify areas where a problem is developing.



AMCO rail

Close Call Reporting Card

Site Name & Contract Number: .....

Type of incident: Safety / Environmental (please circle)

Working Alone: Yes / No / Separated / N/A (please circle)

Location of occurrence: ELR ..... **Location** (e.g. CESS) .....

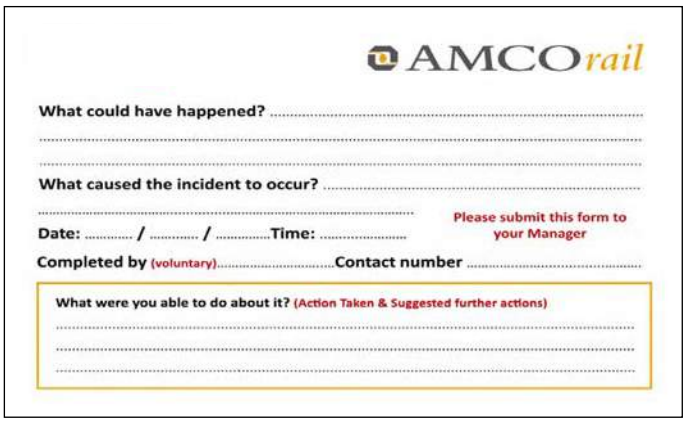
Environmental conditions: Darkness / Inadequate light / Bright sunlight / Snow / Frost / Freezing temps / High wind / Fog / Rain / Heat / Noise (please circle)

Brief description of incident: .....

.....

.....

..... Please turn over



AMCO rail

What could have happened? .....

.....

.....

What caused the incident to occur? .....

.....

Date: ..... / ..... / .....**Time:** .....

Please submit this form to your Manager

Completed by (voluntary).....**Contact number** .....

What were you able to do about it? (Action Taken & Suggested further actions)

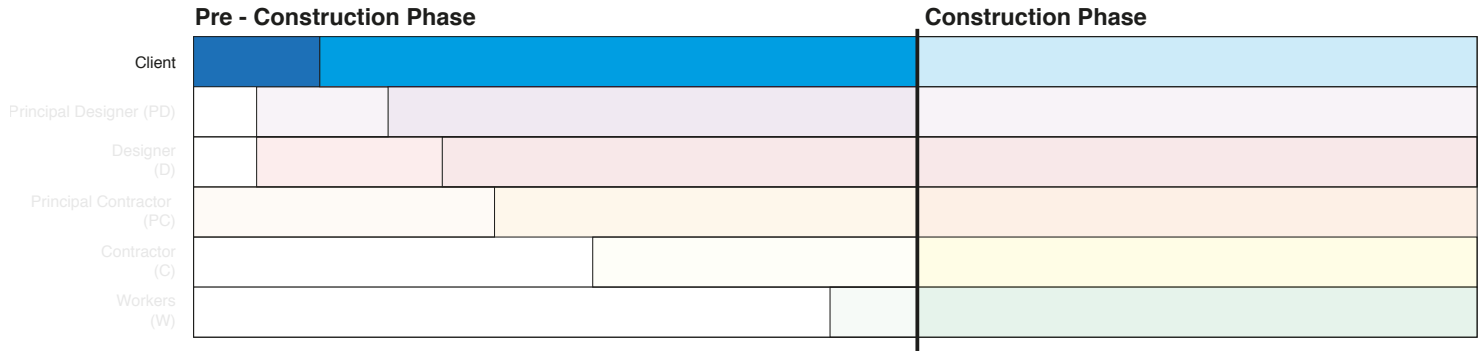
.....

.....

.....

Guidance:
Summary of duties under CDM Regulations 2015 - http://www.hse.gov.uk/construction/cdm/2015/summary.htm

Client duties for managing projects



(4) A Client must provide pre-construction information as soon as is practicable to every Designer and Contractor appointed, or being considered for appointment, to the project.

Should
Client should enter into discussions with Principal Designer and Principal Contractor, appointed or being considered for appointment, and agree information that will be needed.

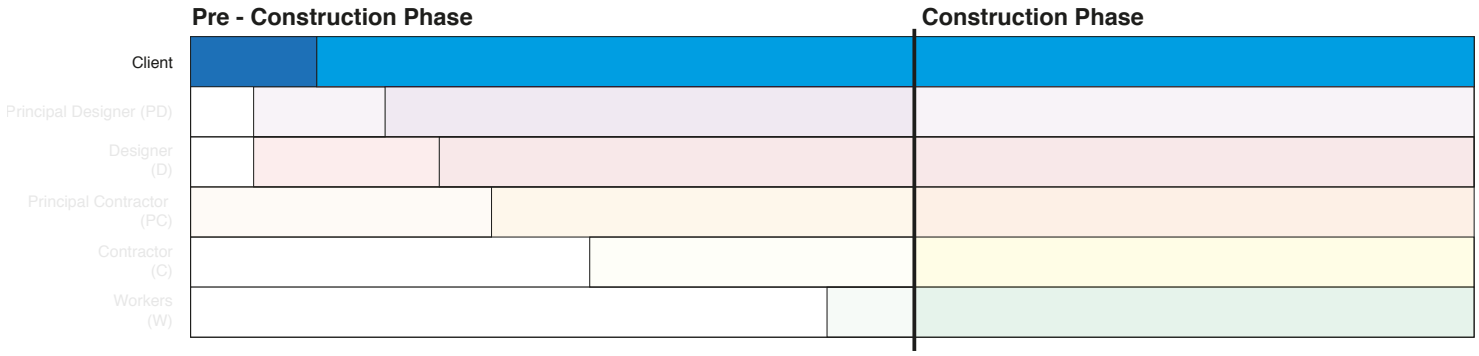
Could
Clients could bring forward appointment of Principal Designer and Principal Contractor to collate information required.

Good Practice

On a road widening scheme where a large number of services where known to be present, the Client followed the guidelines contained in PAS 128.

Guidance:
PAS 128
Commercial Clients: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

Client duties for managing projects



Health and safety file

(5) A Client must ensure that—

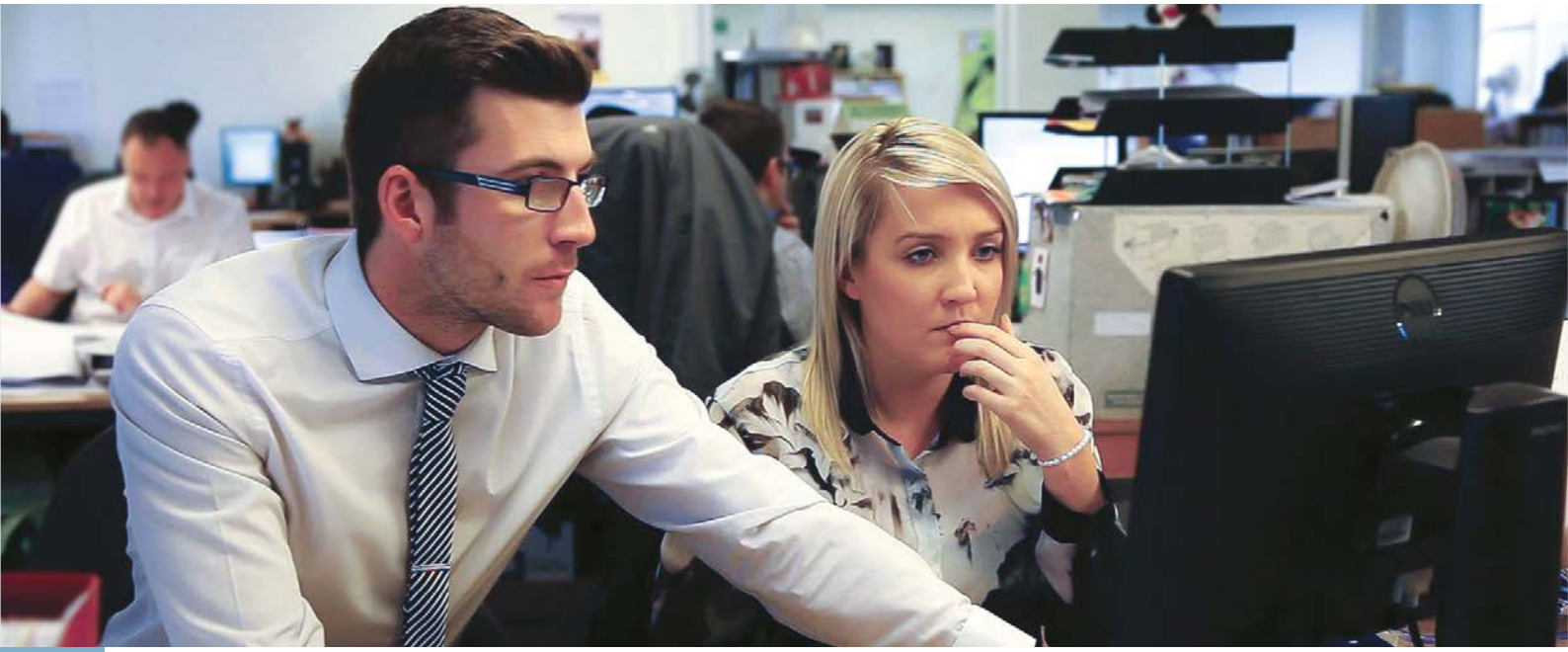
(b) the Principal Designer prepares a health and safety file for the project, which—
(i) complies with the requirements of regulation 12(5);
(ii) is revised from time to time as appropriate to incorporate any relevant new information; and
(iii) is kept available for inspection by any person who may need it to comply with the relevant legal requirements.

Should
Client should ensure the Principal Designer provides the Health and safety file in a format that can be easily understood by those using the structure maintaining the structure or carrying out future works.

Could
Client could ensure clarity in the Health and safety file by requiring information on risk to be noted on “as built” drawings.

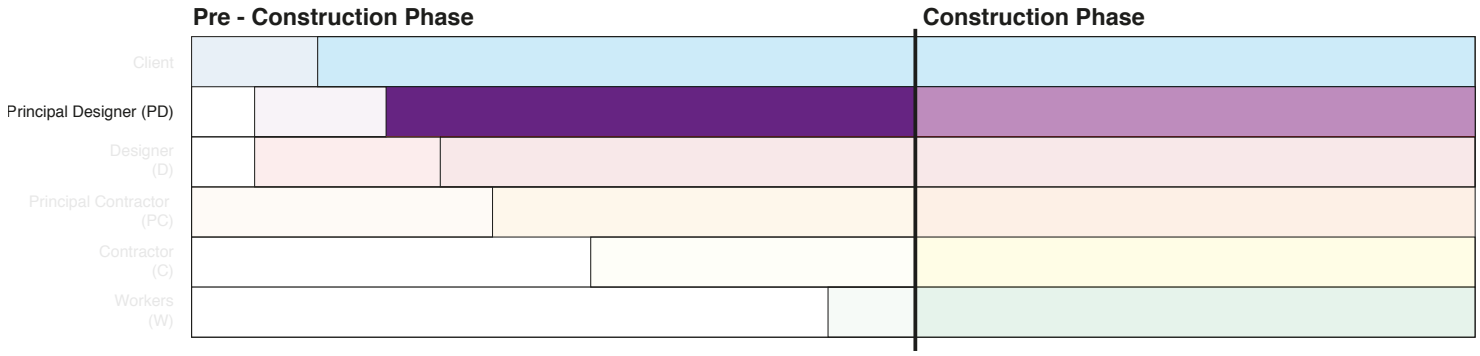
Good Practice

A Client may agree that all information/drawings could be shared using an electronic format.



Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

Construction phase plan and health and safety file



Health and safety file preparation

(5) During the pre-construction phase, the Principal Designer must prepare a health and safety file appropriate to the characteristics of the project which must contain information relating to the project which is likely to be needed during any subsequent project to ensure the health and safety of any person.

Should
Principal Designer should agree the format of information with Client and Designers to ensure consistency in the way information is presented.

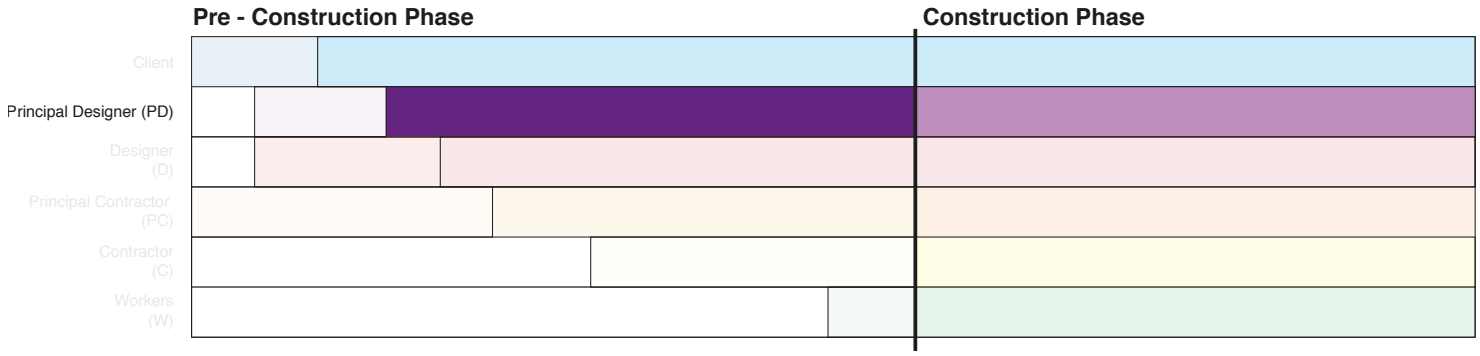
Could
Principal Designers could require Designers to put as much information as possible on drawings. This would give first line supervisors information at the point of risk.

Good Practice

The Client and Principal Designer discussed future use of the structure to agree information needed for maintenance Workers.

REGULATION 12(6)

Construction phase plan and health and safety file



Health and safety file review

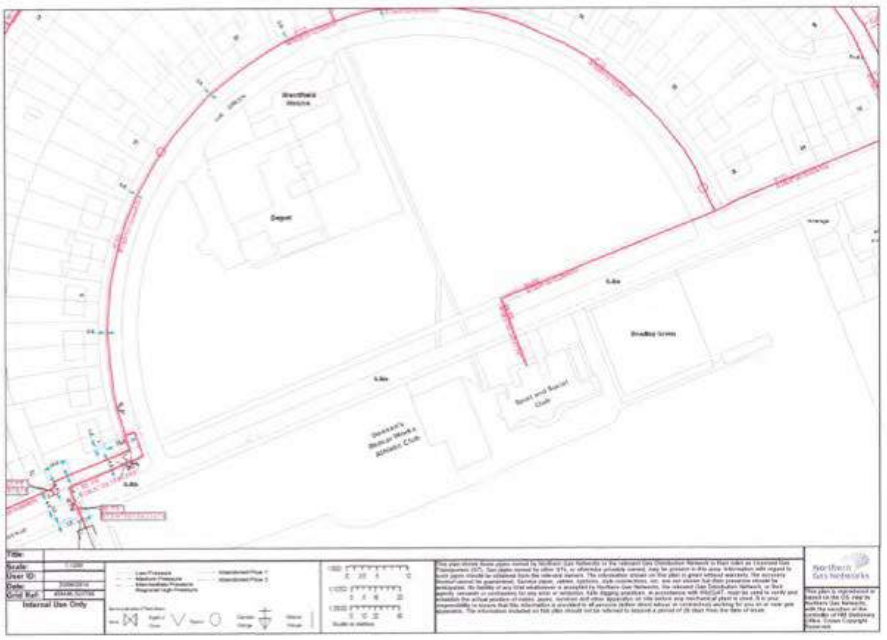
(6) The Principal Designer must ensure that the health and safety file is appropriately reviewed, updated and revised from time to time to take account of the work and any changes that have occurred.

Should
Principal Designers should check the format of the health and safety file to ensure it will be of use to the Client and future Contractors.

Could
Principal Designer could use the expertise of the Principal Contractor and Contractors to check what information they would need for future works.

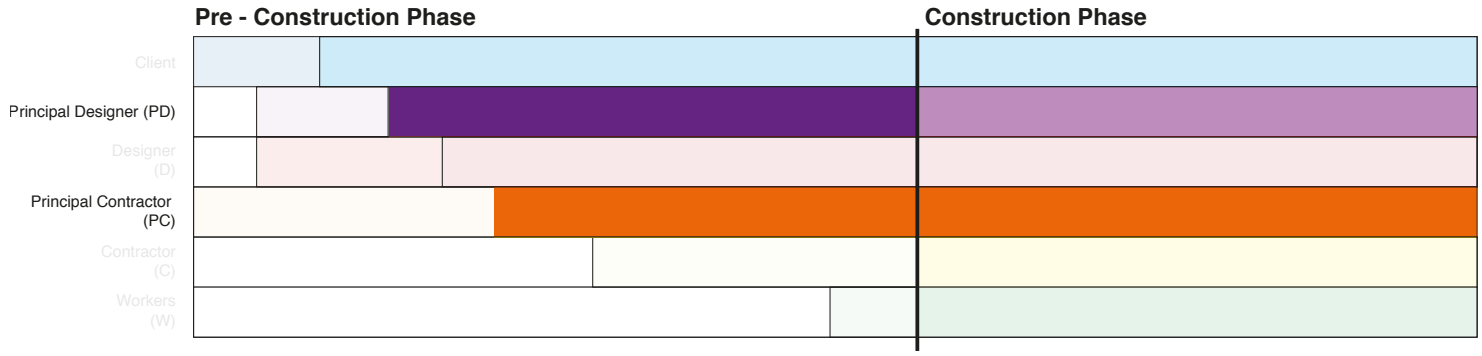
Good Practice

Accurate plotting of service information using Business Information Modelling (BIM) will help in planning for future works.



Guidance:
Building Information Modelling (BIM)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34710/12-1327-building-information-modelling.pdf

Construction phase plan and health and safety file



Information from Principal Contractor to Principal Designer

(7) During the project, the Principal Contractor must provide the Principal Designer with any information in the Principal Contractor's possession relevant to the health and safety file, for inclusion in the health and safety file.

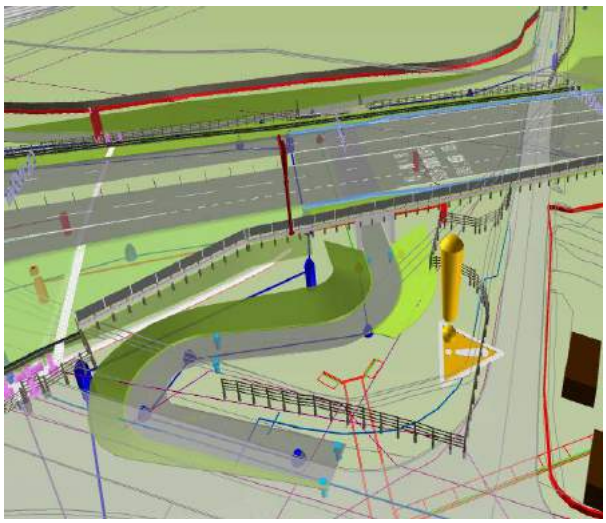
Should
Principal Contractor should agree with the Principal Designer, during the pre-construction phase, the format for information to be passed.

Could
Principal Contractor could use his own experience and that of other Contractors to ensure that only relevant information is passed.

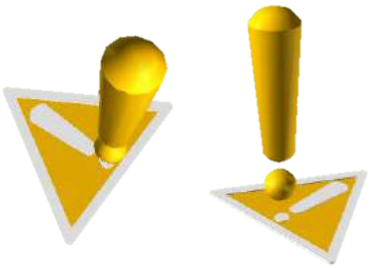
Good Practice

In this example a site team used a BIM process to accurately record all as-built information.

SHE LOG WITHIN THE BIM MODEL



SHE hazards are clearly labelled and modelled directly into the BIM model, allowing for direct access to the Hazard log from within the BIM model, creating one true source of information.



Guidance:
Building Information Modelling (BIM)
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34710/12-1327-building-information-modelling.pdf

REGULATION 12 (8, 9 & 10)

Construction phase plan and health and safety file

Health and safety file transfer

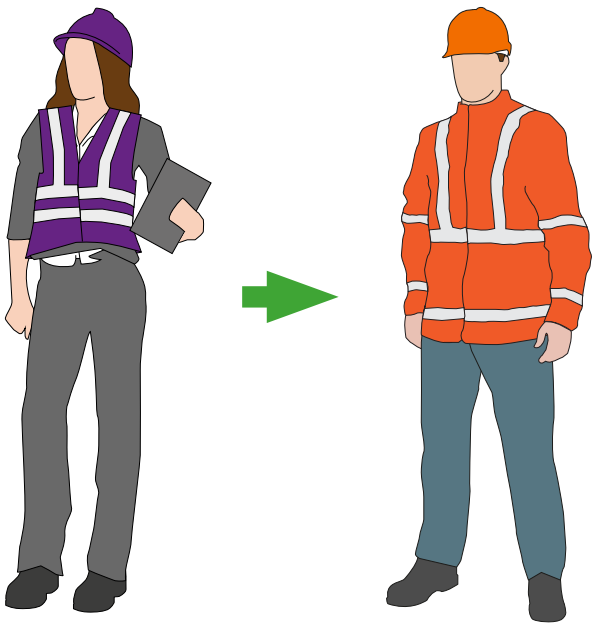
(8) If the Principal Designer's appointment concludes before the end of the project, the Principal Designer must pass the health and safety file to the Principal Contractor.

(9) Where the health and safety file is passed to the Principal Contractor under paragraph (8), the Principal Contractor must ensure that the health and safety file is appropriately reviewed, updated and revised from time to time to take account of the work and any changes that have occurred.

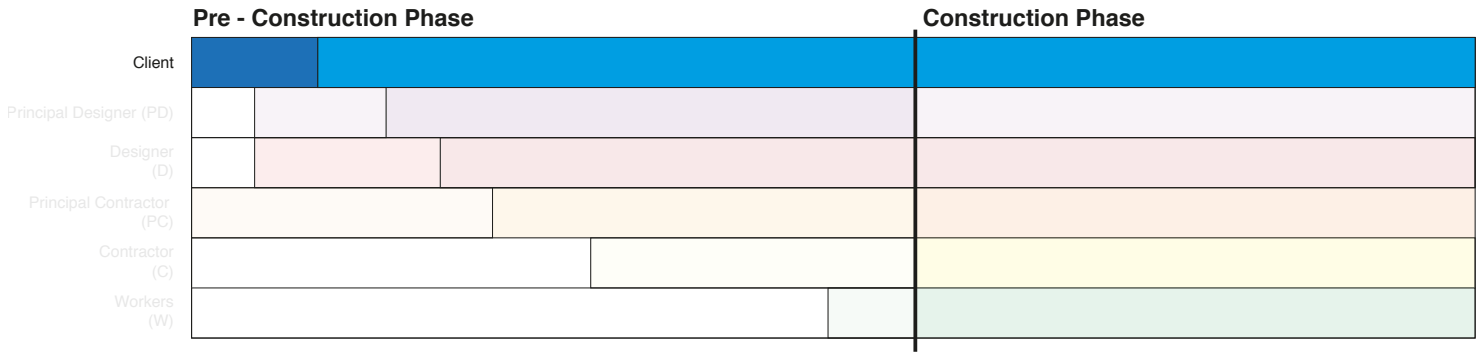
(10) At the end of the project, the Principal Designer, or where there is no Principal Designer the Principal Contractor, must pass the health and safety file to the Client.

Should
The Principal Designer or Principal Contractor should agree with the Client that he has the information he needs in a format he understands.

Could
The Principal Designer or Principal Contractor could walk the project with the Client to show areas that the information relates to.



Client duties for managing projects



(7) If a Client disposes of the Client's interest in the structure, the Client complies with the duty in paragraph (5)(b)(iii) by providing the health and safety file to the person who acquires the Client's interest in the structure and ensuring that that person is aware of the nature and purpose of the file.

(8) Where there is more than one Client in relation to a project—

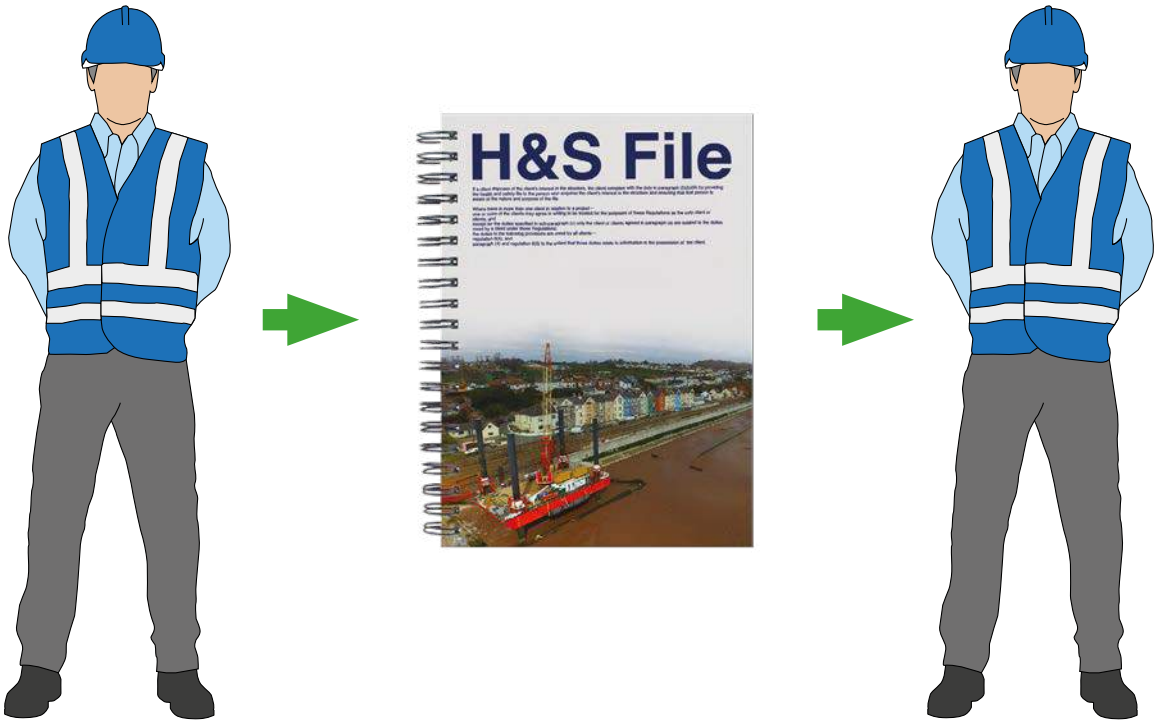
(a) one or more of the Clients may agree in writing to be treated for the purposes of these Regulations as the only Client or Clients; and

(b) except for the duties specified in sub-paragraph (c) only the Client or Clients agreed in paragraph (a) are subject to the duties owed by a Client under these Regulations;

(c) the duties in the following provisions are owed by all Clients—

(i) regulation 8(4); and

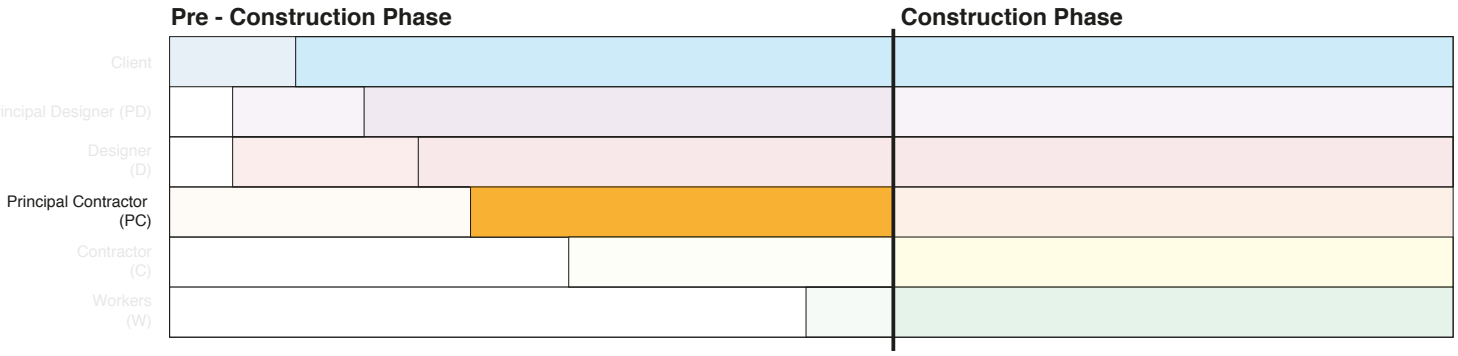
(ii) paragraph (4) and regulation 8(6) to the extent that those duties relate to information in the possession of the Client.



Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

REGULATION 12 (1 & 2)

Construction phase plan and health and safety file



Drawing up of construction phase plan

(1) During the pre-construction phase, and before setting up a construction site, the Principal Contractor must draw up a construction phase plan or make arrangements for a construction phase plan to be drawn up.

(2) The construction phase plan must set out the health and safety arrangements and site rules taking account, where necessary, of the industrial activities taking place on the construction site and, where applicable, must include specific measures concerning work which falls within one or more of the categories set out in Schedule 3.

Should
Construction phase plan should be in a format that the Principal Contractor's managers are familiar with.

Could
Production of the construction phase plan could be a group effort with the opportunity to start bringing in Contractors to the project team.

Construction Phase Plan Content

Construction phase plan must set out the H&S arrangements and site rules taking account where necessary, the industrial activities taking place on the construction site and, where applicable, must include specific measures concerning work which falls within one or more categories set out in Schedule 3.

Schedule 3

1. Risk of burial, fall from height
2. Risk from chemical or biological substances
3. Work with ionizing radiations
4. Work near high voltage power lines
5. Risk of drowning
6. Wells, underground earthworks and tunnels
7. Diving
8. Work in compressed air
9. Work involving explosives
10. Assembly or dismantling of heavy Prefabricated component

Guidance:
L153 - Managing Health & Safety in Construction
http://www.hse.gov.uk/pubns/priced/l153.pdf

Construction phase plan and health and safety file

Information from Principal Designer to Principal Contractor

(3) The Principal Designer must assist the Principal Contractor in preparing the construction phase plan by providing to the Principal Contractor all information the Principal Designer holds that is relevant to the construction phase plan including—

(a) pre-construction information obtained from the Client;

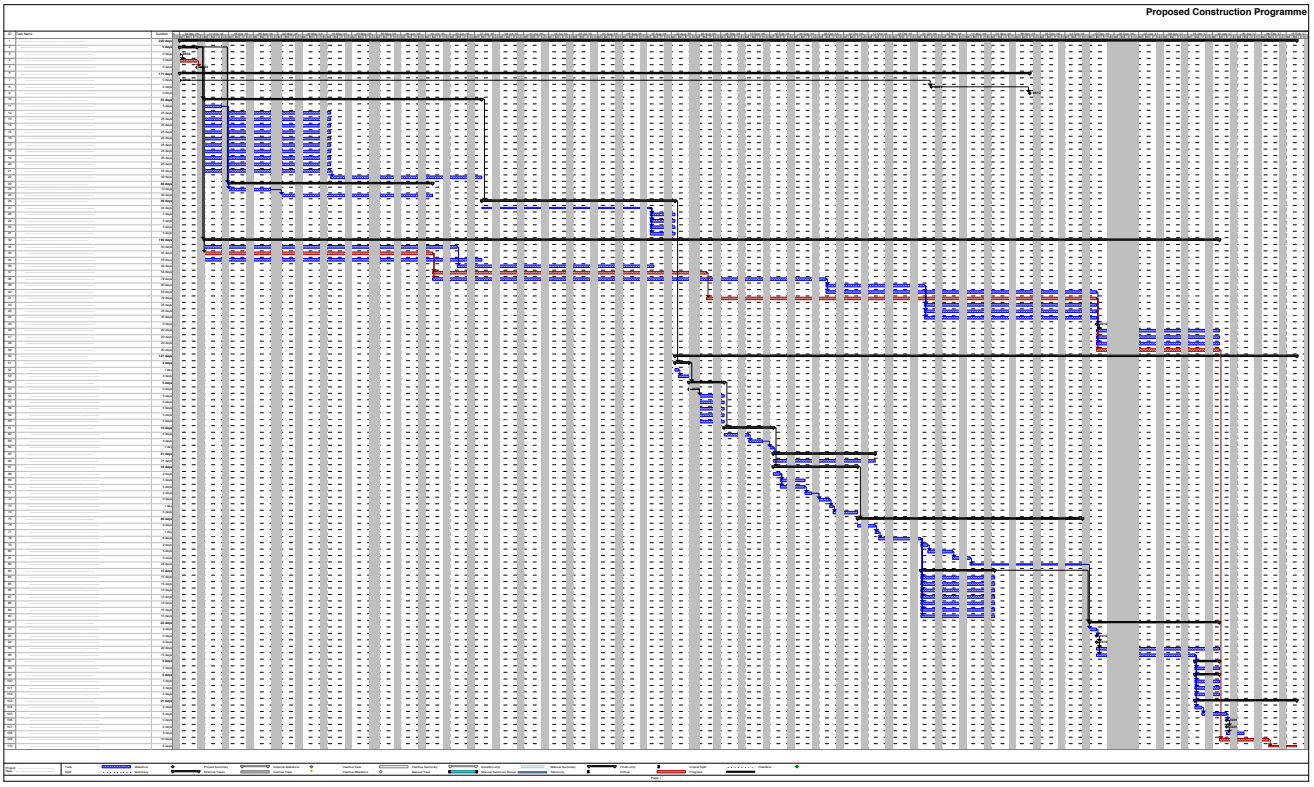
(b) any information obtained from Designers under regulation 9(3)(b).

Should

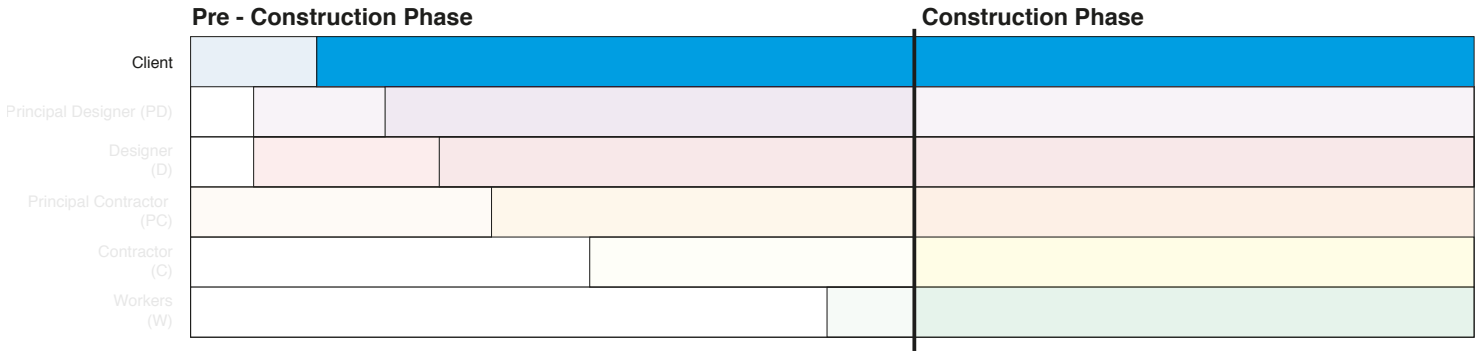
Principal Designer should ensure that information is relevant and critical items are highlighted. Dates should be agreed for disclosure of any outstanding information.

Could

Client could use this stage to ensure all duty holders are clear on how the construction phase will be managed.



Client duties for managing projects



Construction phase plan

(5) A Client must ensure that—

(a) before the construction phase begins, a construction phase plan is drawn up by the Contractor if there is only one Contractor, or by the Principal Contractor;

Should
Client should work through the document with the Contractor or Principal Contractor to make sure paperwork is kept to a minimum, non-essential information is removed and the document is workable.

Could
Client could take this opportunity, as part of his review, to check that the project team is functioning correctly and key dates are agreed before physical risks are encountered.

Good Practice

This is an example where a Principal Contractor used a template similar to the one below.

Construction Phase Plan Template

General Advice

1.0 Introduction
- 1.1 Health and safety risk (pre-construction and Designers)
- 1.2 Health and safety risk construction phase

2.0 Timescales and information required
- 2.1 Project objectives

3.0 Communication and co-ordination
- 3.1 Client communication
- 3.2 Principal Designer
- 3.3 Contractors
- 3.4 Designers
- 3.5 3rd parties
- 3.6 Workforce
- 3.7 Induction and site rules

4.0 Management arrangement
- 4.1 Personnel selection (skills, knowledge and experience)
- 4.2 Project organisation
- 4.3 Project appointments

Construction Phase Plan

1.0 Welfare arrangements
2.0 Fire, first aid and emergency arrangement
3.0 COSHH (Chemical and biologic hazards including dust and fumes)
4.0 Site security
5.0 Site tidiness
6.0 Access / egress / traffic routes
7.0 Workplace transport
8.0 Temperature and weather protection
9.0 Underground and overhead services
10.0 Fatigue
11.0 Health
11.1 Noise
11.2 Vibration
12.0 Excavations
13.0 Cofferdams and caissons
14.0 Work over or near water / drowning
15.0 Diving
16.0 Falls from height
17.0 Explosives
18.0 Energy distribution *This section should be in the mandatory section i.e. after section 8*
19.0 Stability of structures / temporary works
20.0 Lighting
21.0 Radiation

Guidance:
Commercial Clients: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/commercial-Clients.htm

Construction phase plan and health and safety file

Construction phase plan review

(4) Throughout the project the Principal Contractor must ensure that the construction phase plan is appropriately reviewed, updated and revised from time to time so that it continues to be sufficient to ensure that construction work is carried out, so far as is reasonably practicable, without risks to health or safety.

Should
Principal Contractor should use reviews of construction phase plan to update Contractors on management of the project.

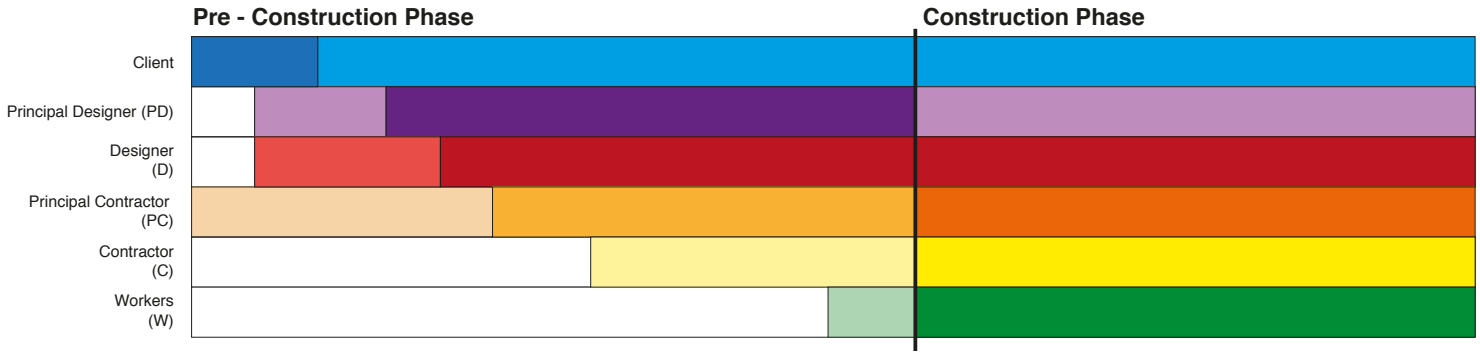
Could
Clients could coordinate their review of arrangements to take place at the same time as construction phase plan review. This could involve all duty holders or Client, Principal Designer and Principal Contractor as a minimum.

Good Practice

Due to the complexity of the project the construction phase plan was amended after rehearsing the construction concept.

REGULATION 8 (4)

General Duties

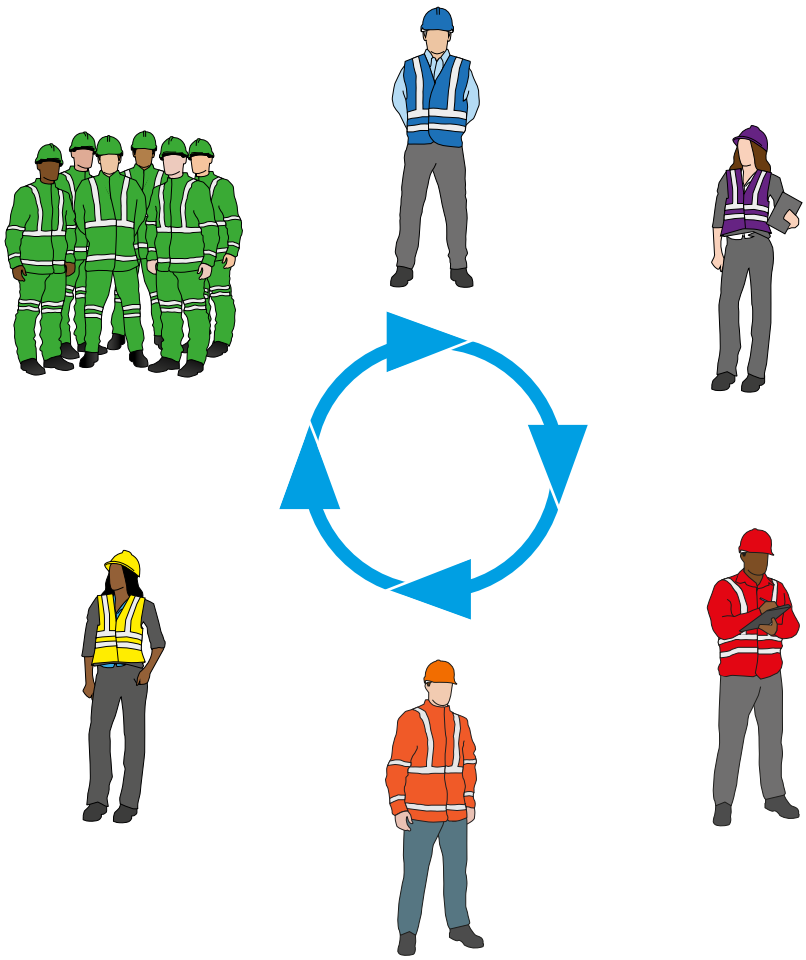


Co-operation by all

(4) A person with a duty or function under these Regulations must cooperate with any other person working on or in relation to a project at the same or an adjoining construction site to the extent necessary to enable any person with a duty or function to fulfil that duty or function.

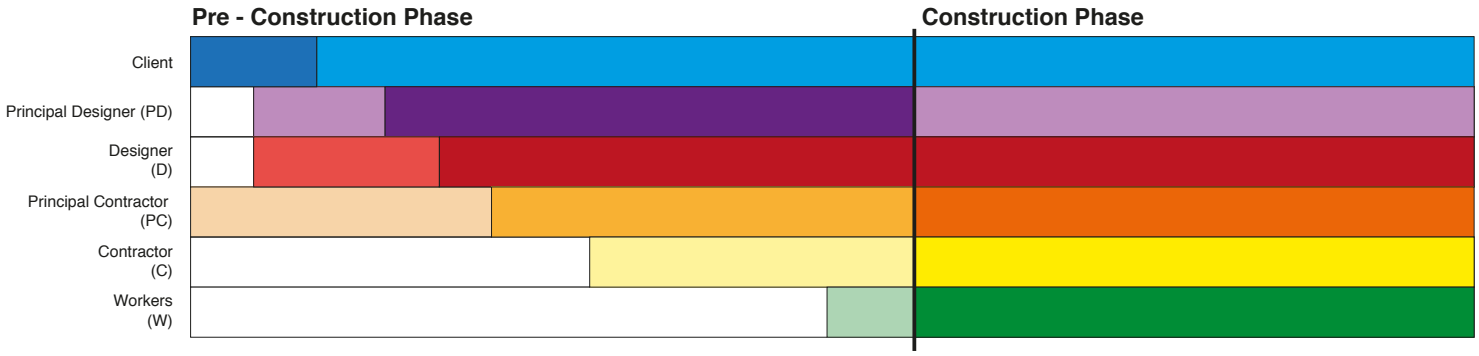
Should
Persons should have the need to cooperate presented formally at induction.

Could
Employers could set up informal mediation procedures to resolve problems before they affect H&S.



Guidance:
Summary of duties under CDM Regulations 2015 - http://www.hse.gov.uk/construction/cdm/2015/summary.htm

General Duties



Information and instruction

(6) Any person who is required by these Regulations to provide information or instruction must ensure the information or instruction is comprehensible and provided as soon as is practicable.

Should
All parties should agree format for information at an early stage. Instructions should be unambiguous and in a format that can be understood by all.

Could
Use of pictorial information could be adopted by all parties.

Good Practice

By using a standard format all parties knew where to find the relevant information.

Job Ref:	Structure Ref No.:
Local Name:	Mileage:
ELR & Line of Route:	OS Ref:
Name of Responsible Manager (R M):	Mob. No. for R M:
Name of Planner:	Mob. No. for Planner:
Name of COSS/IWA:	Mob. No. for COSS/IWA:
Work Activity	

INFILLING OF UNDERPASS

Item No	Document	Y or N/A
1	Selection of Protection Method (SMP)	Y
2	Appendix A in NR/L2/OHS/019	Y
3	Appendix B in NR/L2/OHS/019	Y
4	Appendix C in NR/L2/OHS/019	Y
5	RT3909 (COSS Record of Arrangements & Briefing Form)	Y
6	On-Trac (Data Pack) inc.	Y
a.	Sectional Appendix	Y
b.	Signal / Track Diagrams	Y
c.	Hazard Directory	Y
d.	Hospital info	Y
e.	Local area maps	Y
f.	Quail Map (inserted by Amco)	N/A
g.	MAGIC Map (inserted by Amco)	N/A
7	RT3181 - Line Blockage Form	N/A
8	RT3199 - Possession of the Line Engineering Supervisors Form	N/A
9	Line Clearance Forms	N/A
10	WON item or GZAC Application details	N/A
11	Picop Pack	N/A

Planner Authorisation					
Name:		Signature:		Date:	

For completion by the Planner (upon return of the SSOW Pack)

Post implementation review	Yes	No	Comments
1. Was the Verification form on Page 5 verified by the COSS on the same shift as the work?			
2. Was there a change by the COSS to the SSOW?			
3. If 'Yes' to Q.2 did this require the SSOW hierarchy to be lowered?			

SELECTION OF SAFE SYSTEM OF WORK ON OR NEAR THE LINE

To be completed by the Planner

This Selection of Protection Method covers the following types of Protection FENCED		
Wk. No:	Date:	Nature of Work:

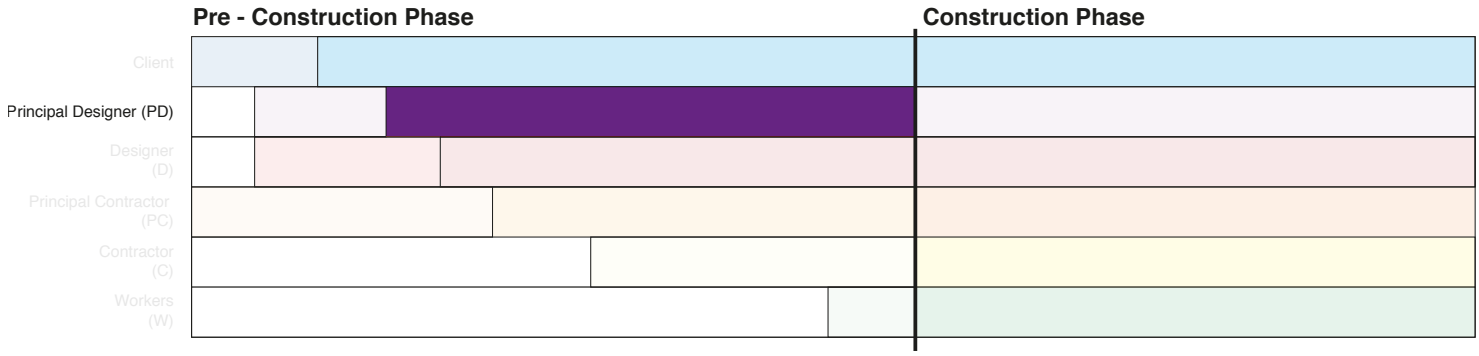
The following safe systems of work are organised in priority order. Each should be considered with the highest achievable system consistent with the nature, location and duration of the work being selected.

If a safe system of work **IS** selected, tick the **YES** box next to the system. When this has been done the Authorisation section on the previous page should be completed. This authorisation should only be given by a Core Planner (Level 2) with line responsibility for the

Guidance:
Summary of duties under CDM Regulations 2015 - http://www.hse.gov.uk/construction/cdm/2015/summary.htm

REGULATION 11 (1 & 2)

Duties of a Principal Designer in relation to health and safety at the pre-construction phase



Plan, manage, monitor and co-ordinate

(1) The Principal Designer must plan, manage and monitor the pre-construction phase and coordinate matters relating to health and safety during the pre-construction phase to ensure that, so far as is reasonably practicable, the project is carried out without risks to health or safety.

(2) In fulfilling the duties in paragraph (1), and in particular when—
(a) design, technical and organisational aspects are being decided in order to plan the various items or stages of work which are to take place simultaneously or in succession; and
(b) estimating the period of time required to complete such work or work stages, the Principal Designer must take into account the general principles of prevention and, where relevant, the content of any construction phase plan and health and safety file.

Should
Principal Designer should ensure he collates all information and ensure that stages are planned and relevant information is sent to those who need it. Principal Designer should review the process to ensure risk is not designed back in by mistake.

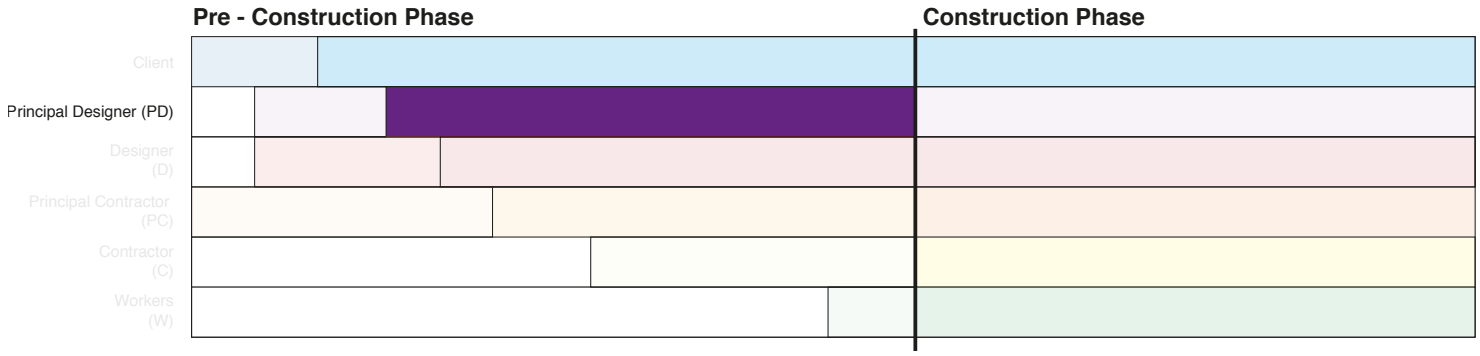
Could
Principal Designer could take advantage of team meetings where the experience of all duty holders is utilised for the common good.

Good Practice

Prior to the construction phase commencing the site team commissioned a model of the project that would be used during all phases of the project including future operation.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

Duties of a Principal Designer in relation to health and safety at the pre-construction phase



Identify and eliminate or control risks

(3) In fulfilling the duties in paragraph (1), the Principal Designer must identify and eliminate or control, so far as is reasonably practicable, foreseeable risks to the health or safety of any person—
(a) carrying out or liable to be affected by construction work;
(b) maintaining or cleaning a structure; or
(c) using a structure designed as a workplace.

Should
Principal Designer should be in a position to visualise both the stages of construction and the completed structure to ensure compliance.

Could
Principal Designer could facilitate an early meeting of all duty holders to agree key dates for information transfer. Use of virtual reality IT systems could aid risk assessments by showing the structure at various stages of construction including when completed.

Good Practice

During the concept phase, the Client commissioned a model of the proposed works to aid design. The model was made available to all parties for use in planning access and lifting arrangements. The model was also used in the site induction.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 11 (4)

Duties of a Principal Designer in relation to health and safety at the pre-construction phase

Designer compliance

(4) In fulfilling the duties in paragraph (1), the Principal Designer must ensure all Designers comply with their duties in regulation 9.

Should
Principal Designer should have systems in place to monitor progress during the pre-construction phase. Such systems should be proactive rather than reactive. Principal Designer should have clear lines of communication with Designers.

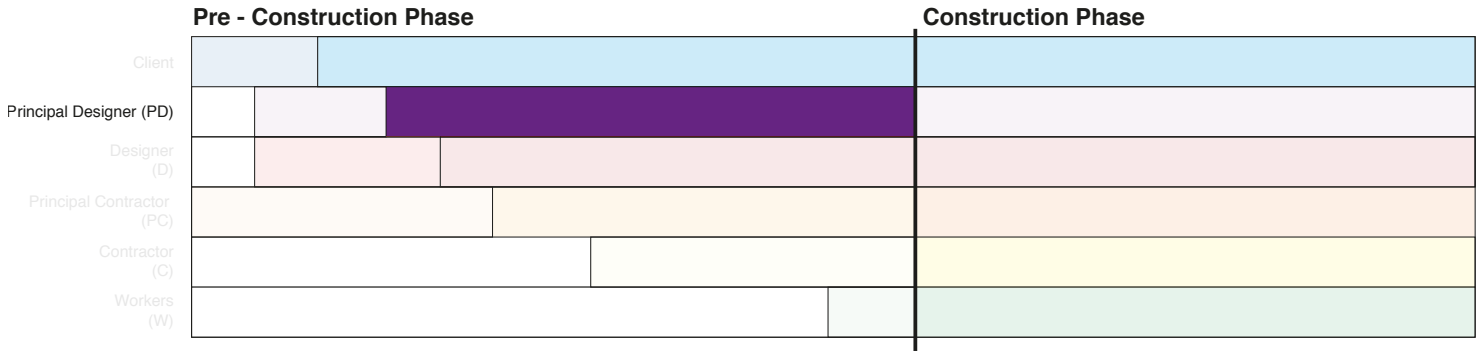
Could
Principal Designer could use checks on Designer compliance to collect good practice and as training for apprentice Designers.

Good Practice

After lengthy risk assessments which looked at lifting or dismantling the piling rig, the temporary works Designer liaised with the Designer and Client and opted for cutting a tunnel through the grade one listed structure to allow access and egress.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

Duties of a Principal Designer in relation to health and safety at the pre-construction phase



Co-operation

(5) In fulfilling the duty to coordinate health and safety matters in paragraph (1), the Principal Designer must ensure that all persons working in relation to the pre-construction phase cooperate with the Client, the Principal Designer and each other.

Should
Principal Designer should monitor all communications and be prepared to intervene where necessary.

Could
Principal Designer could facilitate Designers to share office accommodation with each other to allow more face to face liaison rather than protracted email chains.
Principal Designer and Client could consider early Contractor involvement.

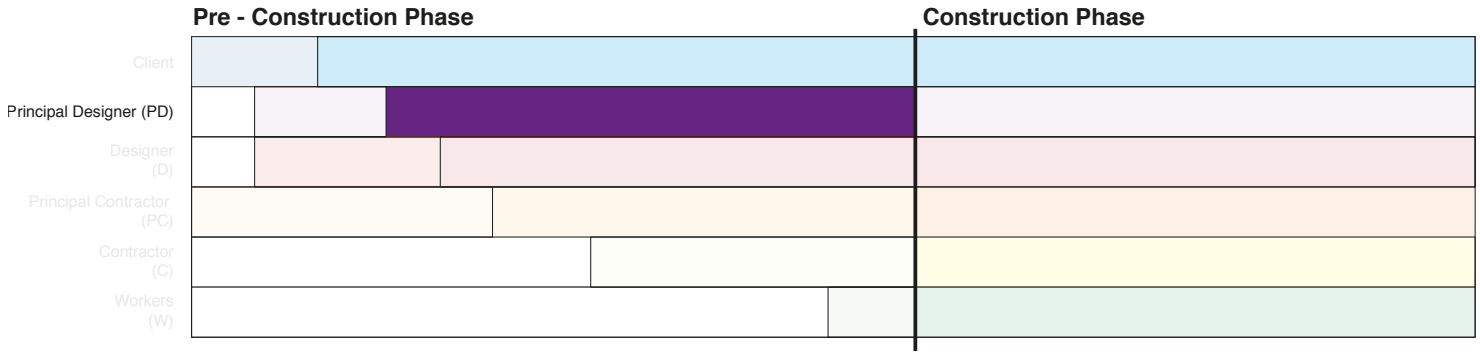
Good Practice

To ensure that the most up to date information was being used weekly meetings between the Client, Principal Designer and Designer were held to discuss progress with the design.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 11 (7)

Duties of a Principal Designer in relation to health and safety at the pre-construction phase



Construction phase liaison

(7) The Principal Designer must liaise with the Principal Contractor for the duration of the Principal Designer's appointment and share with the Principal Contractor information relevant to the planning, management and monitoring of the construction phase and the coordination of health and safety matters during the construction phase.

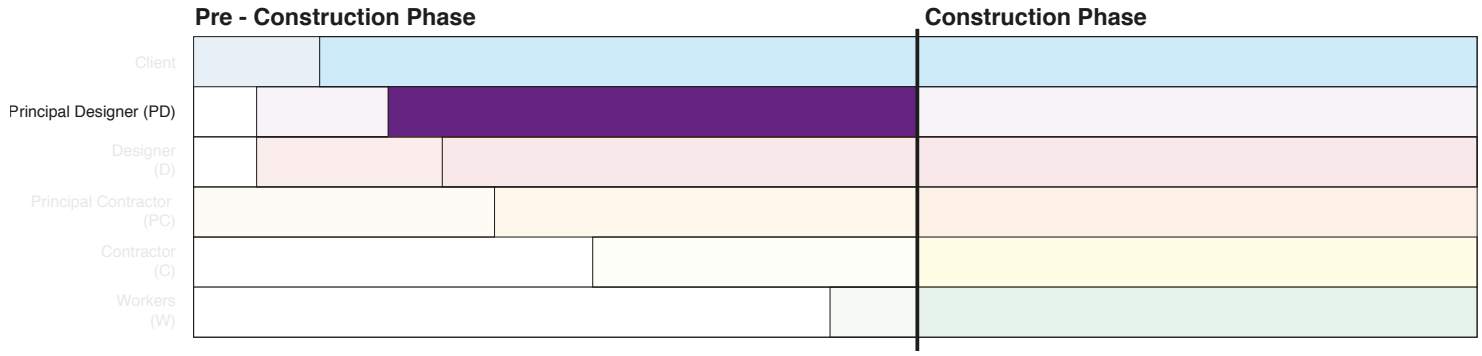
Should
Principal Designer should ensure tender information clearly defines how the Client and Principal Contractor want the project to be managed.

Could
Principal Designer could push the Client for early appointment of Principal Contractor so that his experience and knowledge can be added to pre-construction phase team to allow changes to design for H&S reasons.

Good Practice

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

Duties of a Principal Designer in relation to health and safety at the pre-construction phase



Pre-construction information

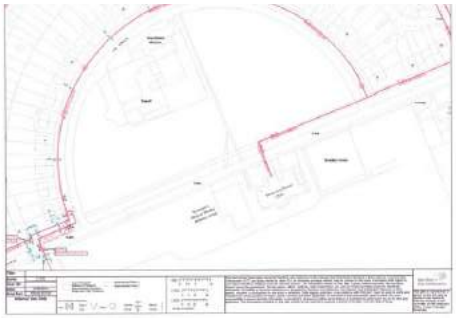
(6) The Principal Designer must—
(a) assist the Client in the provision of the pre-construction information required by regulation 4(4); and
(b) so far as it is within the Principal Designer's control, provide pre-construction information, promptly and in a convenient form, to every Designer and Contractor appointed, or being considered for appointment, to the project.

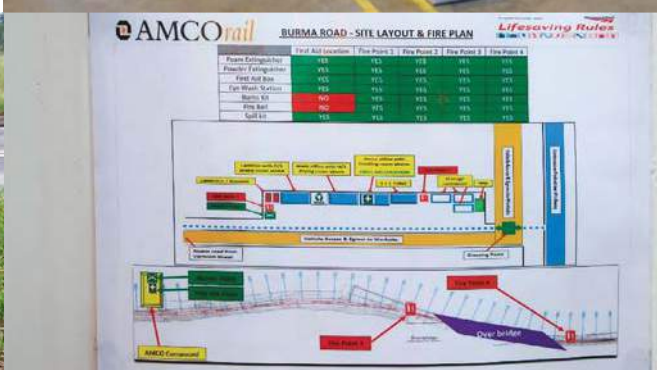
Should
Principal Designer should liaise with duty holders to ascertain what information they need and when they will need it.

Could
Principal Designer could use the knowledge and experience of Designers and Contractors to compile a list of information required for typical structures.

Good Practice

The illustrations below are examples of contributions from team members collated by the Principal Designer on numerous schemes.

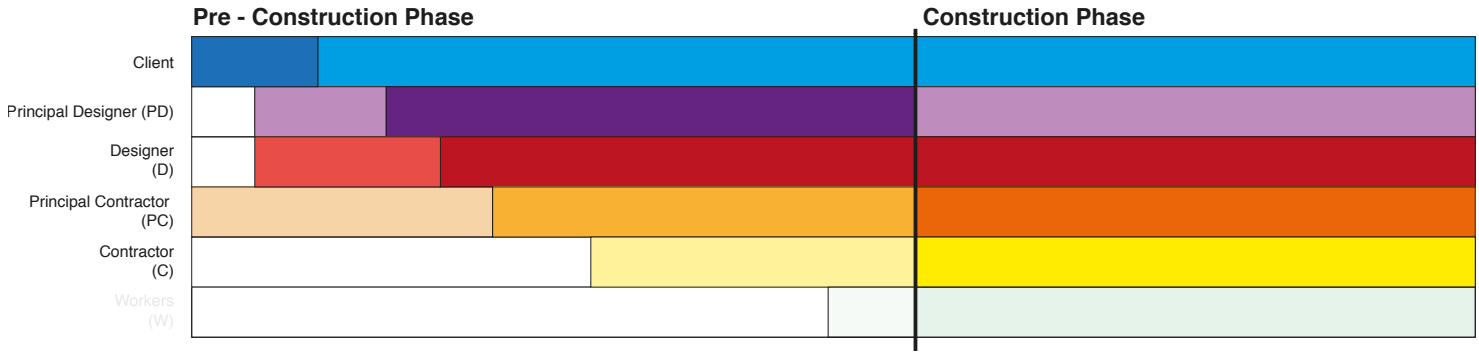




Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 10 (1 & 2)

Designs prepared or modified outside Great Britain

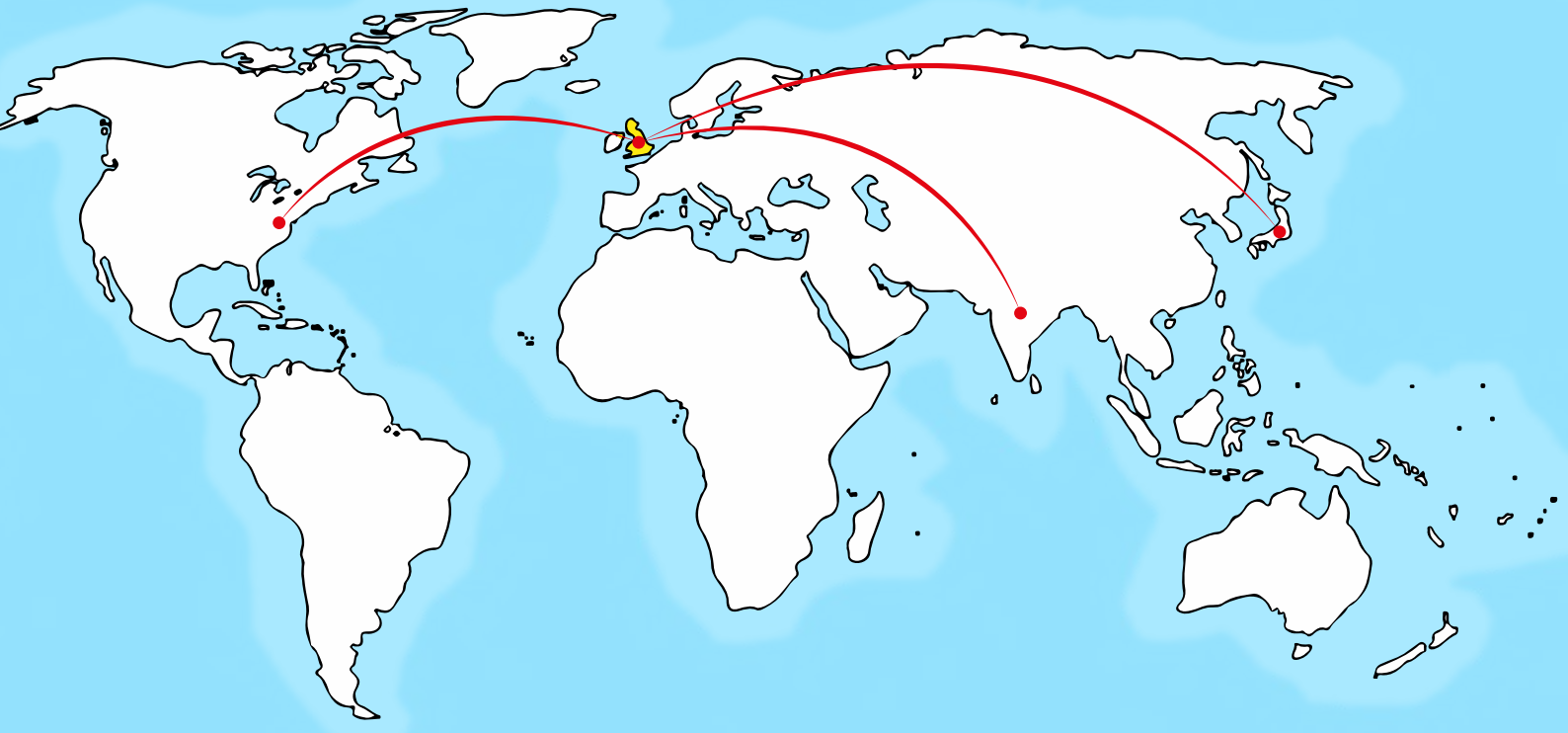


(1) Where a design is prepared or modified outside Great Britain for use in construction work to which these Regulations apply—

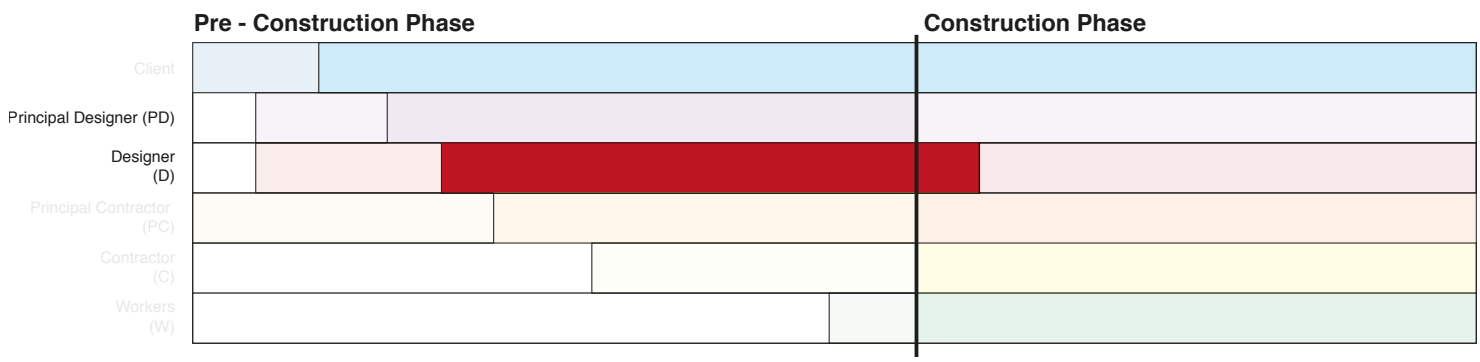
(a) the person who commissions it, if established within Great Britain; or

(b) if that person is not so established, the Client for the project, must ensure that regulation 9 is complied with.

(2) This regulation does not apply to a domestic Client.



Duties of Designers



Elimination of risk (Designers)

(2) When preparing or modifying a design the Designer must take into account the general principles of prevention and any pre-construction information to eliminate, so far as is reasonably practicable, foreseeable risks to the health or safety of any person—
(a) carrying out or liable to be affected by construction work;
(b) maintaining or cleaning a structure; or (c) using a structure designed as a workplace.

(3) If it is not possible to eliminate these risks, the Designer must, so far as is reasonably practicable—
(a) take steps to reduce or, if that is not possible, control the risks through the subsequent design process;
(b) provide information about those risks to the Principal Designer; and
(c) ensure appropriate information is included in the health and safety file.

Should
Designers should use existing checks in the process to allow the health and safety implications of the design to be assessed.

Could
Designers could utilise the knowledge and experience of Contractors to assist in the process.

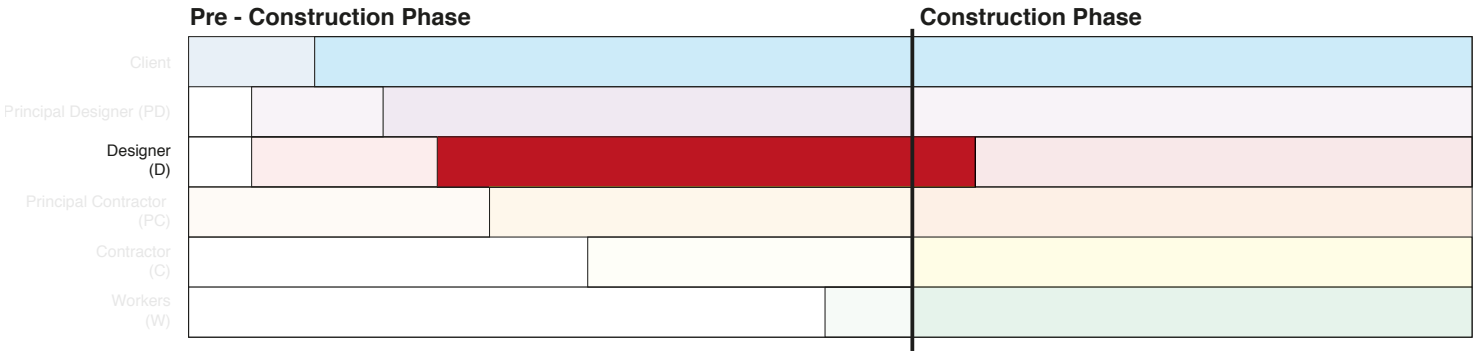
Good Practice

While working on a live reservoir spillway, the Contractor's workforce came up with an innovative solution for the safe method of access and egress which could be removed when not in use. The photographs below demonstrate the value of including the workforce in the consideration of temporary works solutions.

Guidance:
Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Designers.htm
L153 - Managing Health & Safety in Construction - http://www.hse.gov.uk/pubns/priced/l153.pdf

REGULATION 9 (4)

Duties of Designers



Information about risks (Designers)

(4) A Designer must take all reasonable steps to provide, with the design, sufficient information about the design, construction or maintenance of the structure, to adequately assist the Client, other Designers and Contractors to comply with their duties under these Regulations.

Should

Designers should have regular contact with Principal Designer who should ensure early intervention if designs are to be changed. Designers should ensure information to others is easily understood by all.

Could

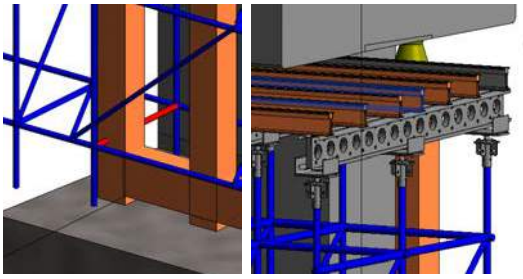
Designers could add information to drawings, this would ensure that information is readily available to first line supervisors. The same drawings when they become “as built” will be available to other first line supervision when carrying out operational and maintenance work.

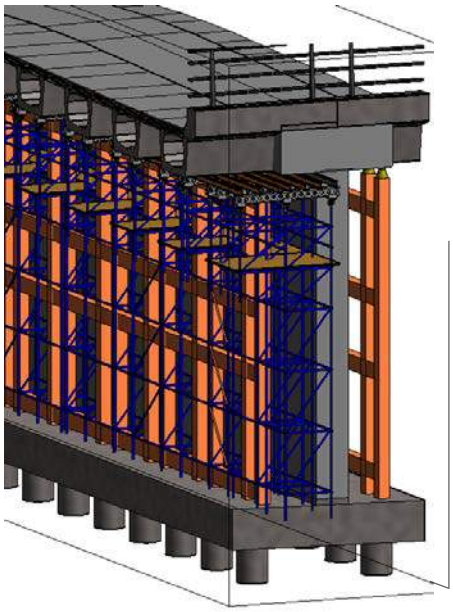
Good Practice

By using the BIM process the Designer could easily identify hazard information to be used by others in their risk assesment process.

DETAILED TEMPORARY WORKS MODELLING

The modelling of temporary works directly within the BIM model is allowing engineers and the wider team to easily visualise the affect it will have during construction. Clashes between two different systems can be easily spotted.





Guidance:

Building Information Modelling (BIM) - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/34710/12-1327-building-information-modelling.pdf

Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Designers.htm

Duties of a Principal Contractor in relation to health and safety at the construction phase

General principals of prevention

(2) In fulfilling the duties in paragraph (1), and in particular when—

(a) design, technical and organisational aspects are being decided in order to plan the various items or stages of work which are to take place simultaneously or in succession; and

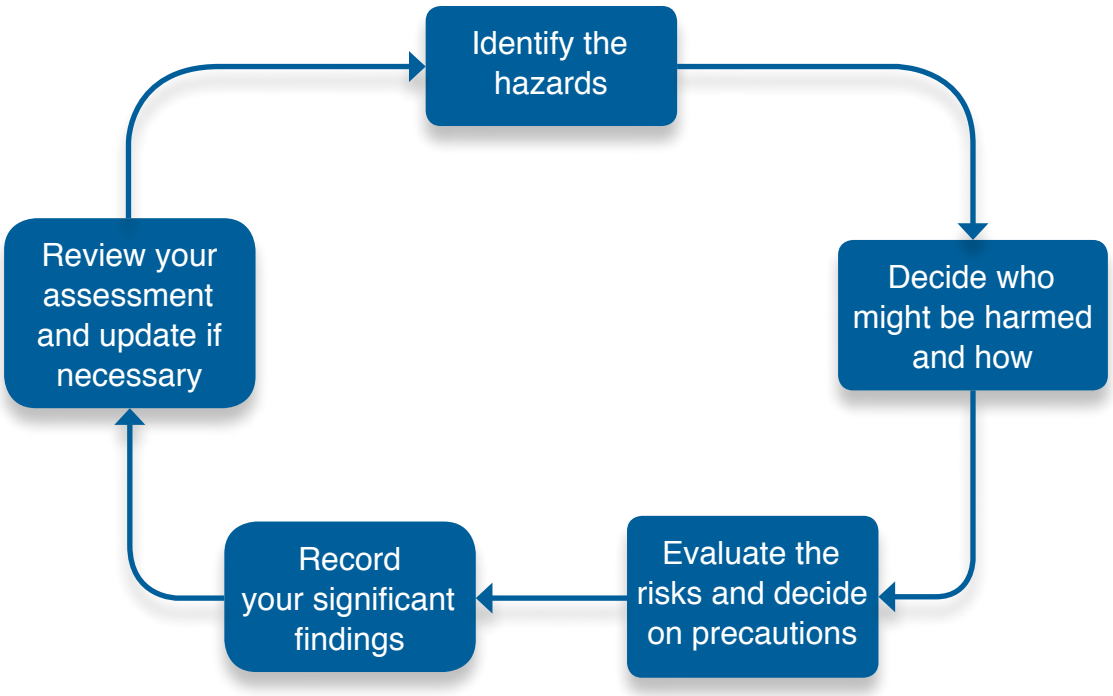
(b) estimating the period of time required to complete the work or work stages; the Principal Contractor must take into account the general principles of prevention.

Should

Principal Contractors should ensure that the General Principles of Prevention are embedded in their management system and Construction Phase Plan.

Could

Principal Contractors could produce a checklist for use by Contractors to help them with self-monitoring. They could also use the workforce when monitoring performance.



Guidance:

Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 16 & 17

Safe places of construction works

16 (1) This Part applies only to a construction site.

(2) A Contractor carrying out construction work must comply with the requirements of this part so far as they affect the Contractor or any Worker under the control of the Contractor or relate to matters within the Contractor's control.

(3) A domestic Client who controls the way in which any construction work is carried out by a person at work must comply with the requirements of this Part so far as they relate to matters within the Client's control.

17 (1) There must, so far as is reasonably practicable, be suitable and sufficient safe access and egress from—

(a) every construction site to every other place provided for the use of any person whilst at work; and
(b) every place construction work is being carried out to every other place to which Workers have access within a construction site.

(2) A construction site must be, so far as is reasonably practicable, made and kept safe for and without risks to the health of any person at work there.

(3) Action must be taken to ensure, so far as is reasonably practicable, that no person uses access to or egress from or gains access to any construction site which does not comply with the requirements of paragraph (1) or (2).

(4) A construction site must, so far as is reasonably practicable, have sufficient working space and be arranged so that it is suitable for any person who is working or who is likely to work there, taking account of any necessary work equipment likely to be used there.

Should
The site team should have agreed compliance and recorded this in the site safety plan.

Could
Client could arrange joint visits to the proposed sites and thereby utilise the experience of all duty holders.

Good Practice

On a scheme where a site compound was remote from the work area the Contractor installed gravel paths to reduce the risk of slips, trips and falls. At the end of the project materials were recovered for use on other sites.

Guidance:
Health and Safety in Construction - Section 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

Duties of a Principal Contractor in relation to health and safety at the construction phase

Site induction

(4) The Principal Contractor must ensure that—
(a) a suitable site induction is provided;

Should
Principal Contractors should tailor the induction to the risks present on site. Induction should be site specific, easily understood, not too long and use drawings or photographs where possible. Principal Contractors should consider repeat inductions on lengthy contracts.

Could
Principal Contractors could develop the initial induction format to lead into start of shift briefings. Briefings could be interactive and benefit from Worker experience.

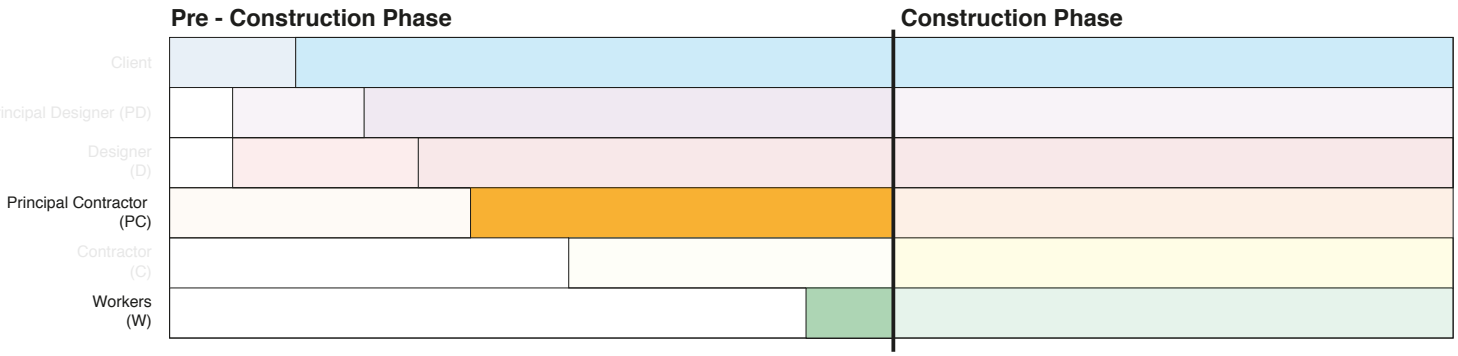
Good Practice

This is an example of hazards and control boards used for both inductions and daily briefings.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 14 (a & b)

Principal Contractor's duties to consult and engage with Workers



Worker consultation

The Principal Contractor must—

(a) make and maintain arrangements which will enable the Principal Contractor and Workers engaged in construction work to cooperate effectively in developing, promoting and checking the effectiveness of measures to ensure the health, safety and welfare of the Workers;

(b) consult those Workers or their representatives in good time on matters connected with the project which may affect their health, safety or welfare, in so far as they or their representatives have not been similarly consulted by their employer;

Should

Principal Contractors should establish the level of consultation before the Contractor starts on site. This should give a start point for site level arrangements.

Could

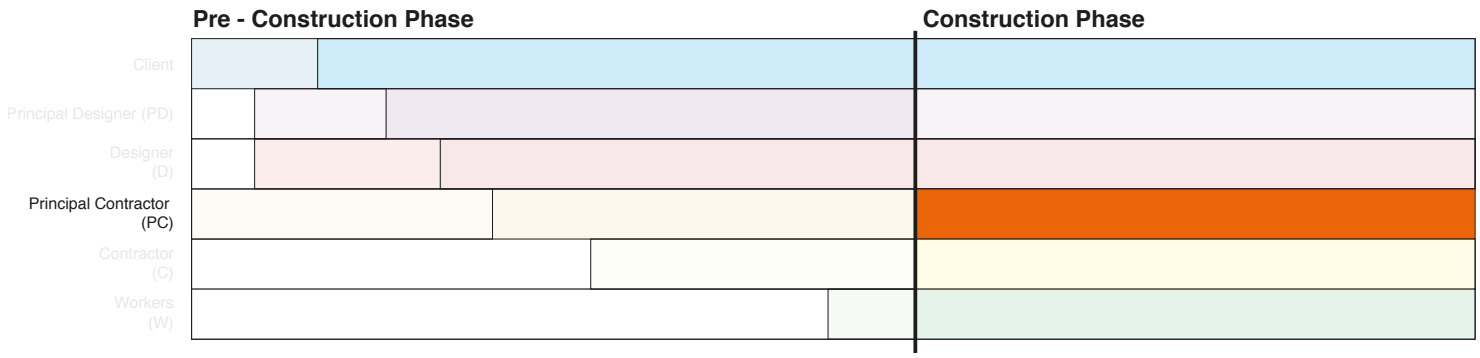
Principal Contractors could use start of shift interactive briefings as a method of consultation (whiteboard).

Good Practice

On this project during daily briefings the Principal Contractor had access to the knowledge and experience of the pro-active workforce.

Guidance:
Principal Contractors: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/principal-Contractors.htm

Duties of a Principal Contractor in relation to health and safety at the construction phase



Site induction

(4)(c) facilities that comply with the requirements of Schedule 2 are provided throughout the construction phase.

Should
Principal Contractors should use the construction phase plan to define what facilities will be required during the project.

Could
Principal Contractors could use the legal requirement as a minimum standard and provide higher standard facilities.

Good Practice

In preparation for the construction of a concrete frame temporary works were designed to retain the facade. As the site was congested the temporary works Designer incorporated welfare facilities in the design.

Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 13 (1)

Duties of a Principal Contractor in relation to health and safety at the construction phase

Plan, manager, monitor and co-ordinate

(1) The Principal Contractor must plan, manage and monitor the construction phase and coordinate matters relating to health and safety during the construction phase to ensure that, so far as is reasonably practicable, construction work is carried out without risks to health or safety;

Should
Principal Contractor should have robust management systems in place which follows the logical progress of the project.

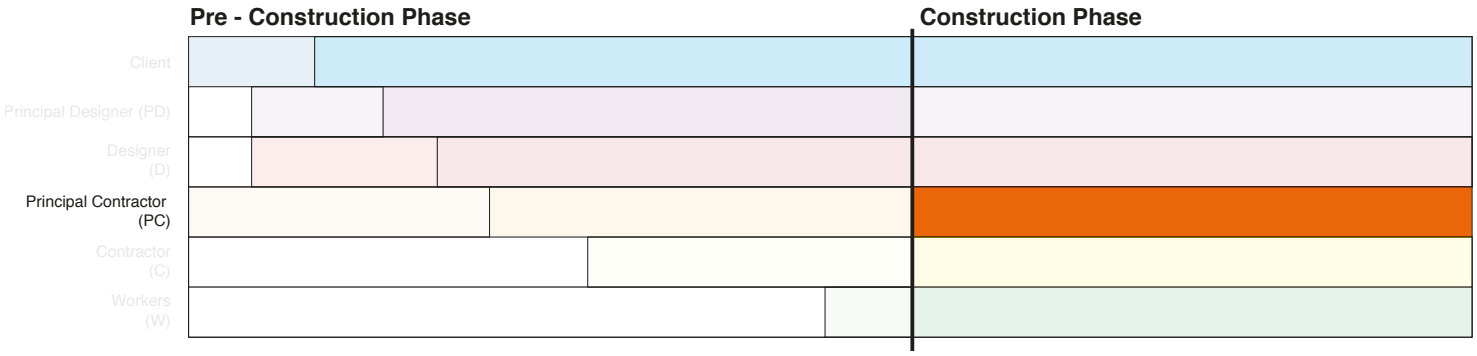
Could
Principal Contractor could use the expertise and experience of Contractors and Workers to help them with the management of H&S.

Good Practice

This is an innovative approach where the Principal Contractor used the Designers' model to assist in planning traffic movements and lifting operations.

Guidance:
Health and Safety in Construction - http://www.hse.gov.uk/pubns/books/hsg150.htm
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

Duties of a Principal Contractor in relation to health and safety at the construction phase



Organise co-operation

(3) The Principal Contractor must—

(a) organise cooperation between Contractors (including successive Contractors on the same construction site):

(b) coordinate implementation by the Contractors of applicable legal requirements for health and safety; and

(c) ensure that employers and, if necessary for the protection of Workers, self-employed persons—

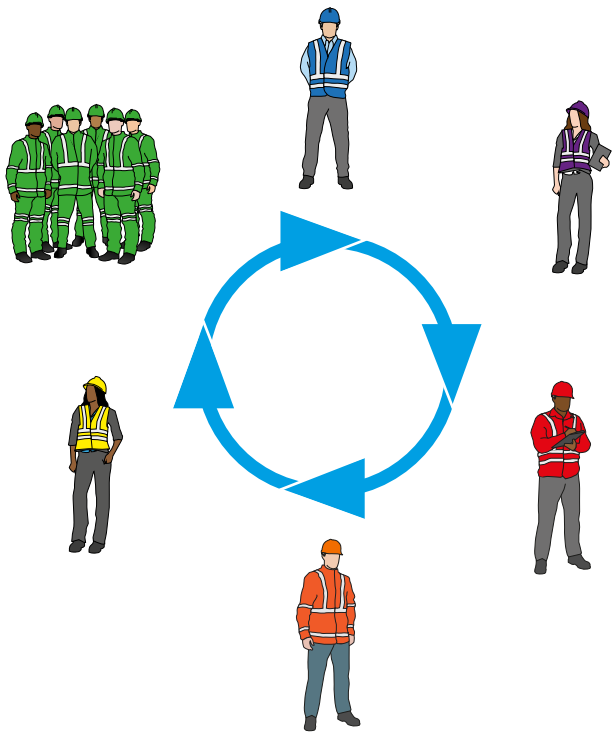
(d) (i) apply the general principles of prevention in a consistent manner, and in particular when complying with the provisions of Part 4; (ii) where required, follow the construction phase plan.

Should

Principal Contractors should have clear lines of communication and control. They should ensure that all communications between Contractors, other Contractors and Designers is channelled through them.

Could

Principal Contractors could set up meetings with all duty holders involved where H&S issues are resolved without confrontation before risks are present. Potential Contractors could start to participate at meeting before their programmed start date.

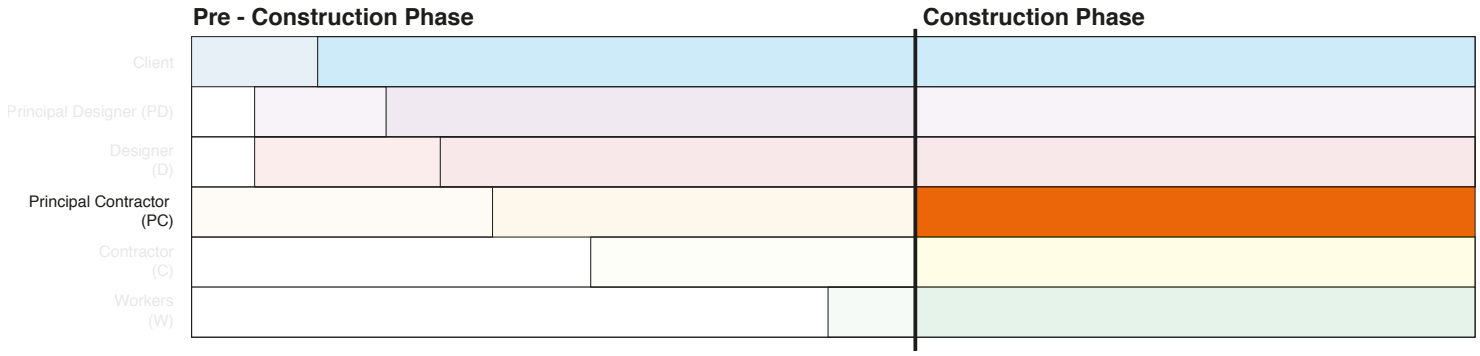


Guidance:

Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 13 (4b)

Duties of a Principal Contractor in relation to health and safety at the construction phase



Site induction

(4)

(b) the necessary steps are taken to prevent access by unauthorised persons to the construction site;

Should

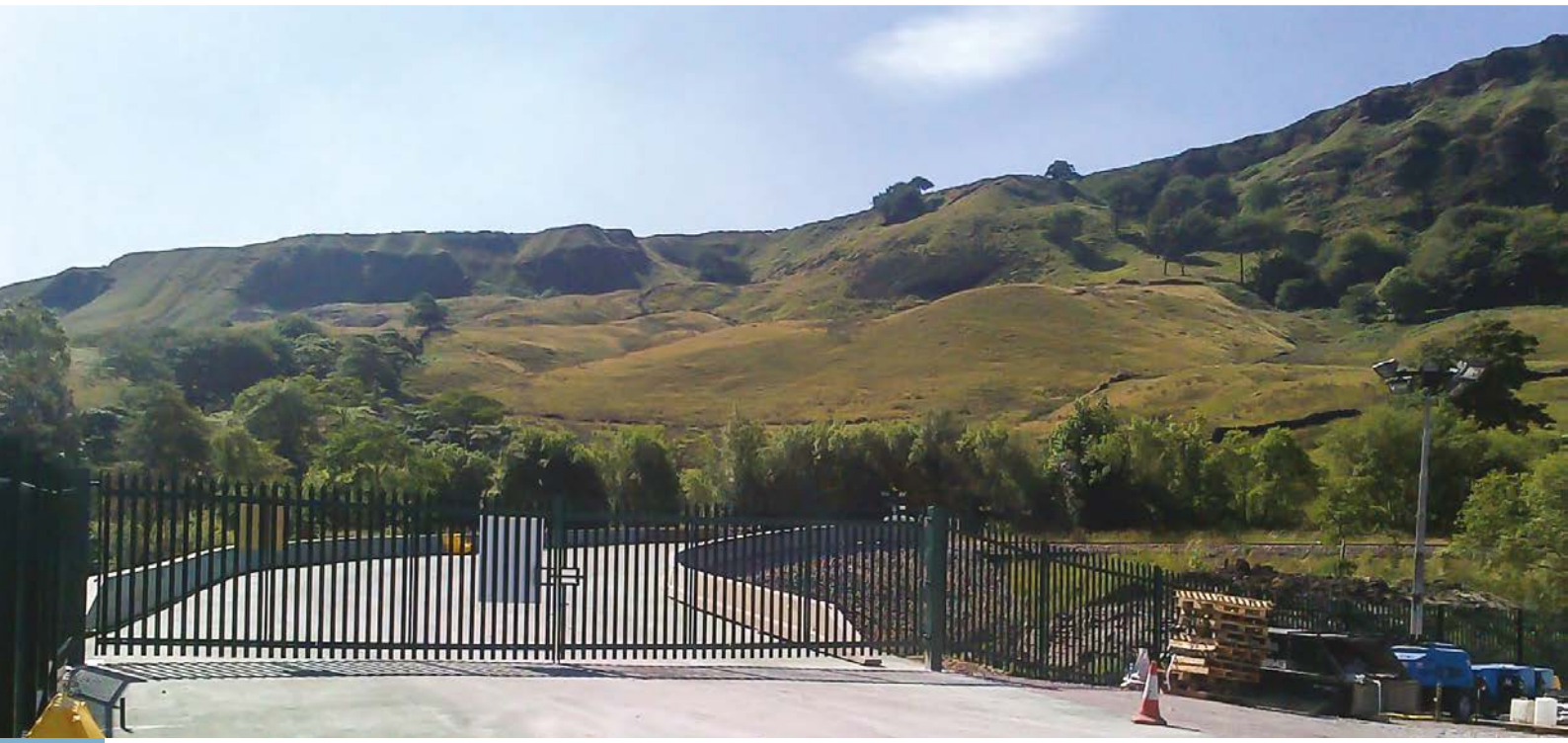
Principal Contractor should take into account the location of the site and adjoining facilities (schools, hospitals, playgrounds etc), when planning site access.

Could

Principal Contractors could install permanent site fencing early if design is available. Where practical they could use turnstiles with cards or fingerprint recognition to both restrict access and keep a tally of who is on site.

Good Practice

On this sensitive project the Client's requirement to take over the site compound once construction was complete allowed installation of permanent fencing prior to start of the construction phase.



Guidance:

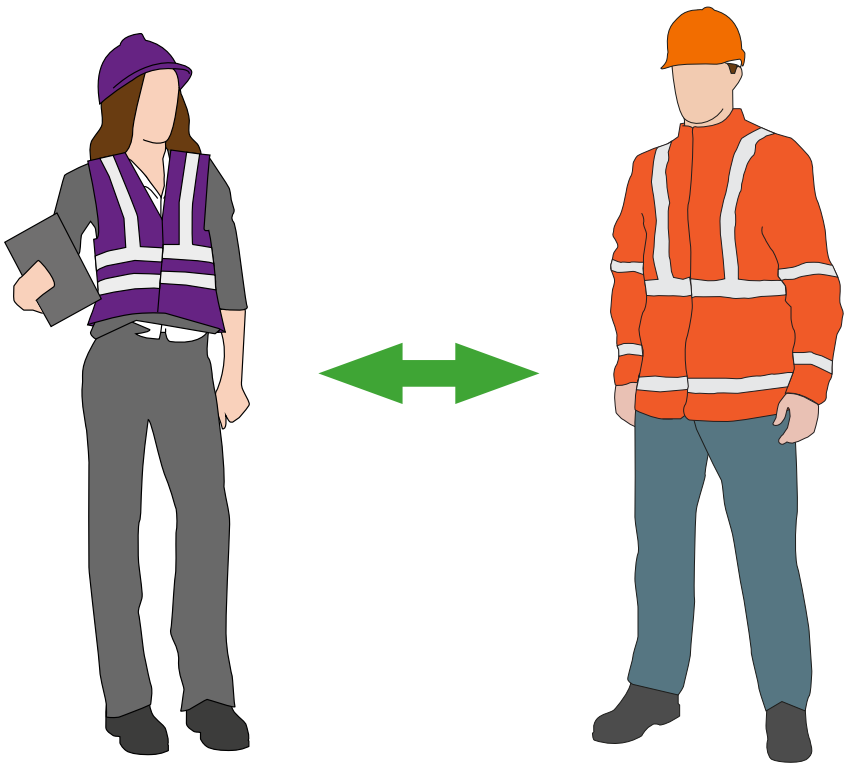
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

Duties of a Principal Contractor in relation to health and safety at the construction phase

(5) The Principal Contractor must liaise with the Principal Designer for the duration of the Principal Designer's appointment and share with the Principal Designer information relevant to the planning, management and monitoring of the pre-construction phase and the coordination of health and safety matters during the pre-construction phase.

Should
Principal Designer should make the Principal Contractor aware of the information he needs. This should help the Principal Designer to manage the pre-construction phase.

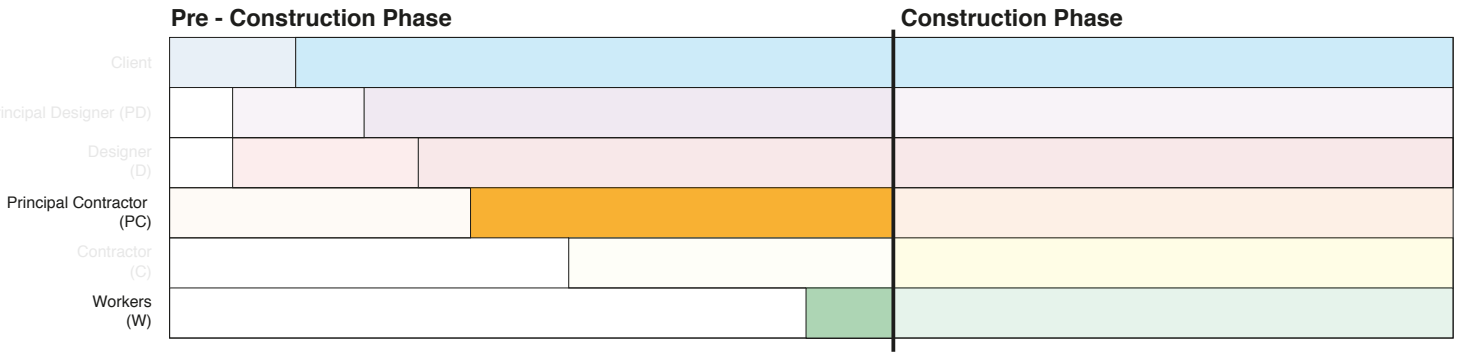
Could
If appointed early enough the Principal Contractor could act as the link to Contractors.



Guidance:
Principal Designers: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/principal-Designers.htm

REGULATION 14 (c)

Duties of a Principal Contractor in relation to health and safety at the construction phase



(c) ensure that those Workers or their representatives can inspect and take copies of any information which the Principal Contractor has, or which these Regulations require to be provided to the Principal Contractor, which relate to the health, safety or welfare of Workers at the site, except any information—

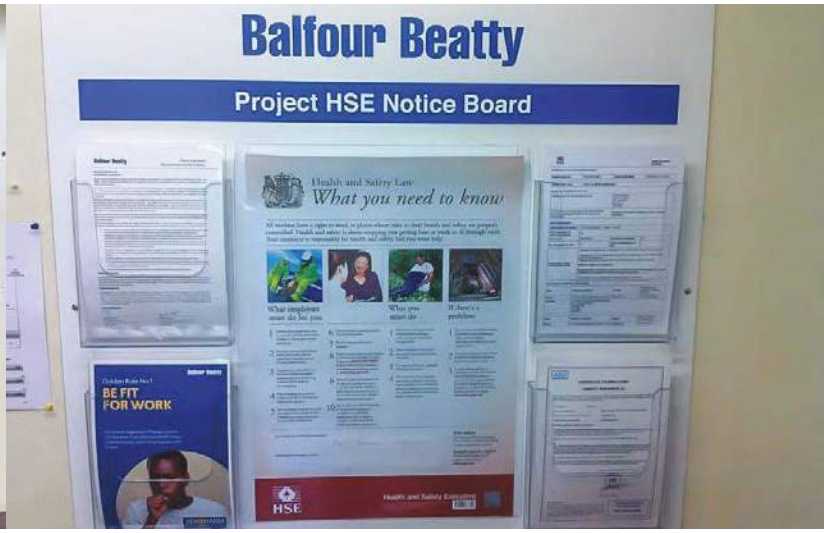
- *(i) the disclosure of which would be against the interests of national security;*
- *(ii) which the Principal Contractor could not disclose without contravening a prohibition imposed by or under an enactment;*
- *(iii) relating specifically to an individual, unless that individual has consented to its being disclosed;*
- *(iv) the disclosure of which would, for reasons other than its effect on health, safety 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;*
- *(v) obtained by the Principal Contractor for the purpose of bringing, prosecuting or defending any legal proceedings.*

Should
Principal Contractor should provide most information by displayed documentation.

Could
Principal Contractor could agree with Workers what copies of documents need to be kept in accessible areas.

Good Practice

The Principal Contractor on this project consulted the workforce to compile a list of documents they required. These were then displayed on the notice board with free copies made available to take away.



Guidance:
Principal Contractors: roles and responsibilities
http://www.hse.gov.uk/construction/cdm/2015/principal-Contractors.htm

Duties of Contractors

Plan, manage and monitor

(2) A Contractor must plan, manage and monitor construction work carried out either by the Contractor or by Workers under the Contractor's control, to ensure that, so far as is reasonably practicable, it is carried out without risks to health and safety.

Should
Contractors should make themselves aware of the Regime on the project and clarify what is expected of them before work starts.

Could
Contractors could visit the project in advance and request any information they will need.

Good Practice

This is another example of a Designers site model being used during Contractors' briefings.

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

REGULATION 15 (3)

Duties of Contractors

Directions to Contractors

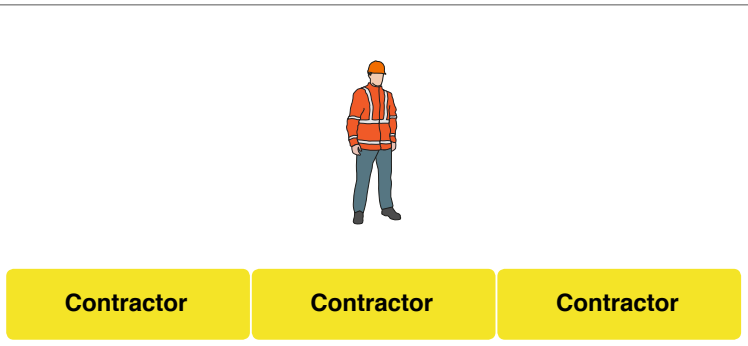
(3) Where there is more than one Contractor working on a project, a Contractor must comply with—
(a) any directions given by the Principal Designer or the Principal Contractor; and
(b) the parts of the construction phase plan that are relevant to that Contractor's work on the project.

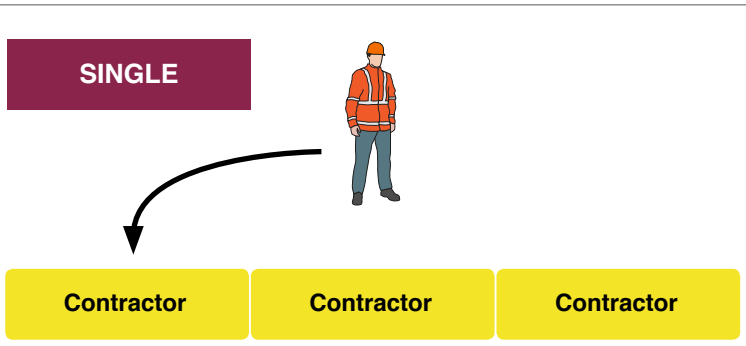
Should
Contractors should clarify the rules on site and the construction phase plan before starting work.

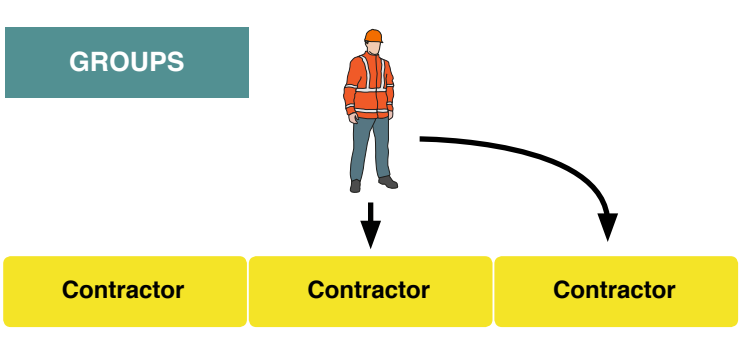
Could
Contractors could use daily briefings and request Principal Contractor participation.

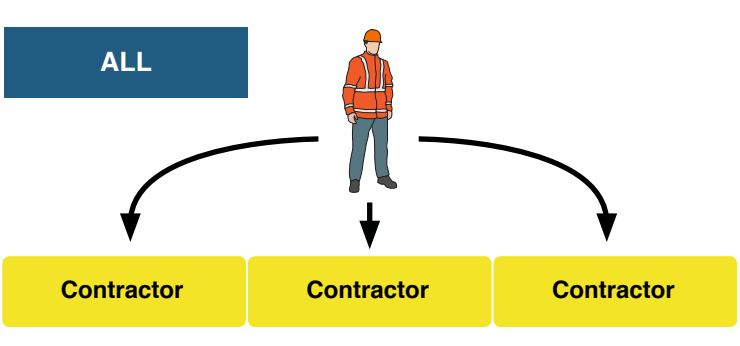
Good Practice

A Principal Contractor must be able to share information and instructions with single, groups or all Contractors.









Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

Duties of Contractors

General principals of prevention (single Contractor)

(4) If there is only one Contractor working on the project, the Contractor must take account of the general principles of prevention when—

(a) design, technical and organisational aspects are being decided in order to plan the various items or stages of work which are to take place simultaneously or in succession; and

(b) Estimating the period of time required to complete the work or work stages.

Should
Single Contractors should be prepared to seek advice from Designers if needed.

Could
Single Contractor could utilise the knowledge of the workforce when planning future works.

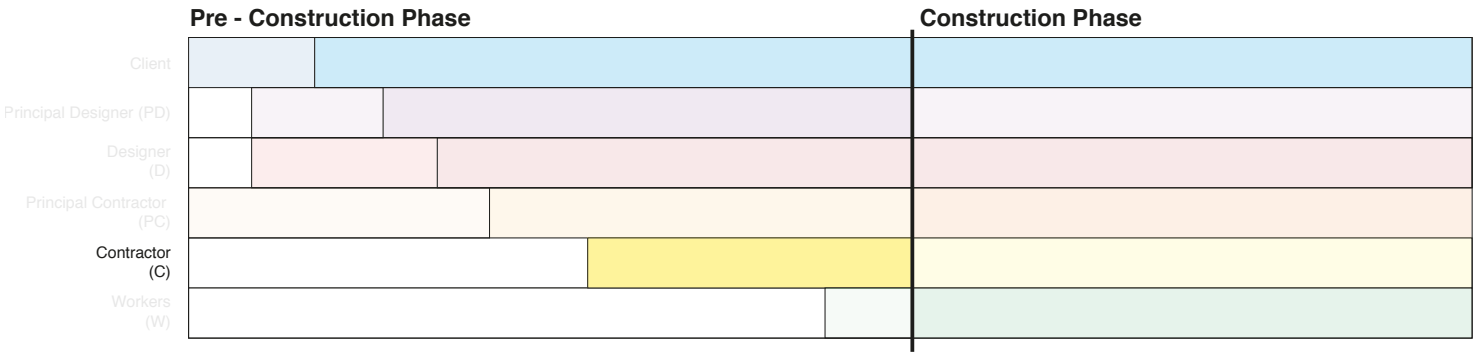
Schedule 3

1. Risk of burial, fall from height
2. Risk from chemical or biological substances
3. Work with ionizing radiations
4. Work near high voltage power lines
5. Risk of drowning
6. Wells, underground earthworks and tunnels
7. Diving
8. Work in compressed air
9. Work involving explosives
10. Assembly or dismantling of heavy Prefabricated component

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

REGULATION 15 (5 & 6)

Duties of Contractors



Construction phase plan (single Contractor)

(5) If there is only one Contractor working on the project, the Contractor must draw up a construction phase plan, or make arrangements for a construction phase plan to be drawn up, as soon as is practicable prior to setting up a construction site.

(6) The construction phase plan must fulfil the requirements of regulation 12(2).

Should

Single Contractor should view HSE Guidance on plan content.

Could

Contractor could use plan template contained in this publication.

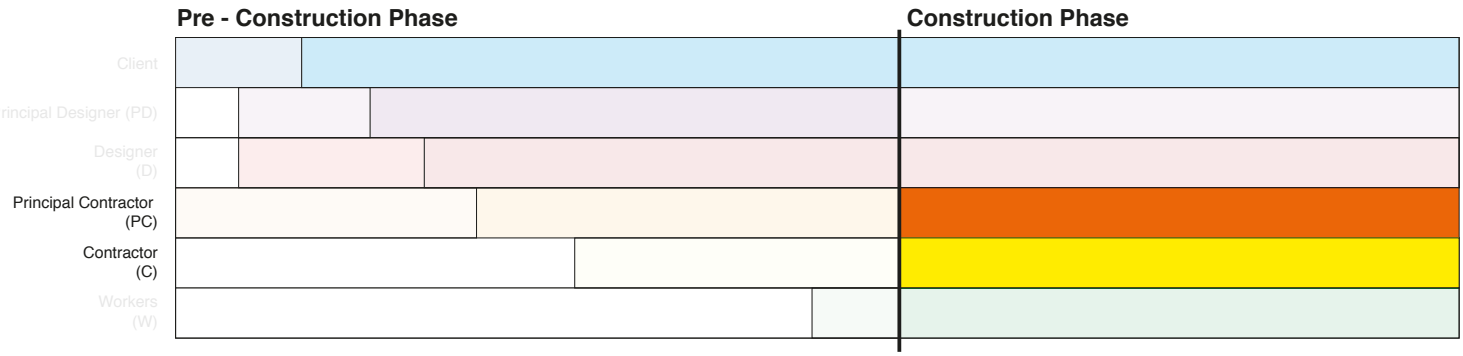
Schedule 3

1. Risk of burial, fall from height
2. Risk from chemical or biological substances
3. Work with ionizing radiations
4. Work near high voltage power lines
5. Risk of drowning
6. Wells, underground earthworks and tunnels
7. Diving
8. Work in compressed air
9. Work involving explosives
10. Assembly or dismantling of heavy Prefabricated component

Guidance:

Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

Duties of Contractors



Skills, knowledge, training and experience

(7) A Contractor must not employ or appoint a person to work on a construction site unless that person has, or is in the process of obtaining, the necessary skills, knowledge, training and experience to carry out the tasks allocated to that person in a manner that secures the health and safety of any person working on the construction site.

Should
On multi Contractor sites Contractors should clarify competency levels contained in the construction phase plan.

Could
Contractors could use CSCS, CPCS for example as the basis for competency.

Good Practice

The Worker in the blue helmet attended training/passed his exams and now holds a Personal Track Safety (PTS) card. He will continue to wear the blue helmet which identifies his in-experience and helps his supervisor allocate tasks until his employer is satisfied he has gained the necessary experience.

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

REGULATION 15 (8 & 9)

Duties of Contractors

Supervision, instruction and information

(8) A Contractor must provide each Worker under their control with appropriate supervision, instructions and information so that construction work can be carried out, so far as is reasonably practicable, without risks to health and safety.

(9) The information provided must include—
(a) a suitable site induction, where not already provided by the Principal Contractor;
(b) the procedures to be followed in the event of serious and imminent danger to health and safety;
(c) information on risks to health and safety—
(i) identified by the risk assessment under regulation 3 of the Management Regulations, or
(ii) arising out of the conduct of another Contractor's undertaking and of which the Contractor in control of the Worker ought reasonably to be aware; and

(d) any other information necessary to enable the Worker to comply with the relevant statutory provisions.

Should
Contractors should have systems in place that ensure first line supervision is on site and information can be easily understood.

Could
Contractors could use briefings and briefing boards to negate the need for unnecessary paperwork.

Good Practice

An example of the Principal Contractor using a Designers model during his information briefings.

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

Duties of Contractors

Contractor site access

(10) A Contractor must not begin work on a construction site unless reasonable steps have been taken to prevent access by unauthorised persons to that site.

Should
Contractor should take into account local conditions when selecting fencing hoarding to be used.

Could
Contractor could discuss needs with local schools and police, and adopt the considerate constructors scheme.

Good Practice

On this scheme the Client specifically requested fencing which had been designed to allow information and advertising to be displayed.

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm
Considerate Constructors Scheme - http://www.ccscheme.org.uk/

REGULATION 15 (11)

Duties of Contractors

Welfare facilities, Contractor

(11) A Contractor must ensure, so far as is reasonably practicable, that the requirements of Schedule 2 are complied with so far as they affect the Contractor or any Worker under that Contractor's control.

Good Practice

An example of where the Contractor consulted with the workforce to ensure the facilities suited the type of work undertaken.

Guidance:
Contractors: roles and responsibilities - http://www.hse.gov.uk/construction/cdm/2015/Contractors.htm

REGULATION
18

Good order and site security

(1) Each part of a construction site must, so far as is reasonably practicable, be kept in good order and those parts in which construction work is being carried out must be kept in a reasonable state of cleanliness.

(2) Where necessary in the interests of health and safety, a construction site must, so far as is reasonably practicable, and in accordance with the level of risk posed, comply with either or both of the following—
(a) have its perimeter identified by suitable signs and be arranged so that its extent is readily identifiable; or
(b) be fenced off.

(3) No timber or other material with projecting nails (or similar sharp object) must—
(a) be used in any construction work; or
(b) be allowed to remain in any place, if the nails (or similar sharp object) may be a source of danger to any person.

Should
Site teams should agree level of protection needed taking into account local facilities such as schools playing fields etc.

Could
Site team could provide viewing areas and encourage local schools to attend site on a formal basis where childrens' curiosity would be satisfied.

Good Practice

On this project site management and Worker inspections were supplemented by senior management and safety advisor visits to ensure a high standard was maintained.

Guidance:
Health and Safety in Construction - Section 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

19

Stability of structures

(1) All practicable steps must be taken, where necessary to prevent danger to any person, to ensure that any new or existing structure does not collapse if, due to the carrying out of construction work, it—

(a) may become unstable; or

(b) is in a temporary state of weakness or instability.

(2) Any buttress, temporary support or temporary structure must—

(a) be of such design and installed and maintained so as to withstand any foreseeable loads which may be imposed on it; and

(b) only be used for the purposes for which it was designed, and installed and is maintained.

(3) A structure must not be so loaded as to render it unsafe to any person.

Should

Client should as part of his checking process identify the areas of design expertise that will be needed during the construction phase.

Could

Principal Designer could identify the need for temporary works early and use this as part of the selection process for the Principal Contractor.

Good Practice

On this project the Contractor carried out a risk assessment and used a drag box which would provide stability in all ground conditions.

Guidance:

BS5975: 2008 Code of practice for temporary works procedures and the permissible stress design of falsework

http://www.hse.gov.uk/scotland/temporary-works-management.pdf (slide 6)

REGULATION
20

Demolition or dismantling

(1) The demolition or dismantling of a structure must be planned and carried out in such a manner as to prevent danger or, where it is not practicable to prevent it, to reduce danger to as low a level as is reasonably practicable.

(2) The arrangements for carrying out such demolition or dismantling must be recorded in writing before the demolition or dismantling work begins.

Should
Contractor should plan the demolition to reduce the number of Workers on site to a minimum.

Could
Client could place the demolition contract separately to leave the Principal Contractor a clear site.

Good Practice

Following a negative asbestos survey and disconnection of services the demolition Contractor was able to demolish the structure using an excavator. Sorting of materials was also completed mechanically.

Guidance:
Health and Safety in Construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

21

Explosives

(1) So far as is reasonably practicable, explosives must be stored, transported and used safely and securely.

(2) An explosive charge may be used or fired only if suitable and sufficient steps have been taken to ensure that no person is exposed to risk of injury from the explosion or from projected or flying material caused by the explosion.

Should
Principal Contractor should make everyone aware of the controls in place.

Could
Principal Contractor could clear the site whenever explosives are being transported, set or fired.

Good Practice

On this high risk project the Contractor controlled issue and storage by transporting explosives to the workplace in clearly marked locked boxes.

Guidance:
http://www.hse.gov.uk/pubns/books/l151.htm - Explosives Regulations 2014 - Security provisions
http://www.hse.gov.uk/pubns/books/l150.htm - Explosives Regulations 2014 - Safety provisions

Excavations

(1) All practicable steps must be taken to prevent danger to any person, including, where necessary, the provision of supports or battering, to ensure that—

(a) no excavation or part of an excavation collapses;

(b) no material forming the walls or roof of, or adjacent to, any excavation is dislodged or falls; and

(c) no person is buried or trapped in an excavation by material which is dislodged or falls.

Should
Principal Contractor should ensure that excavations are made safe by designed support systems or batters.

Could
Principal Contractors could provide support systems for excavations with integral edge protection and toe boards.

Good Practice

This is an example of where the Principal Contractor designed sheet piled support system in which the piles were of sufficient length to be left high enough to provide edge protection.

Guidance:
Health and safety in construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION 22 (2, 3, 4, & 5)

Excavations

(2) Suitable and sufficient steps must be taken to prevent any person, work equipment, or any accumulation of material from falling into any excavation.

(3) Suitable and sufficient steps must be taken, where necessary, to prevent any part of an excavation or ground adjacent to it from being overloaded by work equipment or material.

(4) Construction work must not be carried out in an excavation where any supports or battering have been provided in accordance with paragraph (1) unless—

(a) the excavation and any work equipment and materials which may affect its safety have been inspected by a competent person—

(i) at the start of the shift in which the work is to be carried out;

(ii) after any event likely to have affected the strength or stability of the excavation; or

(iii) after any material unintentionally falls or is dislodged; and

(b) the person who carried out the inspection is satisfied that construction work can be safely carried out there.

(5) Where the person carrying out an inspection has informs the person on whose behalf the inspection is carried out of any matter about which they are not satisfied (under regulation 24(1)), construction work must not be carried out in the excavation until the matter has been satisfactorily remedied.

Should
Principal Contractor should make everyone aware of the controls in place.

Could
Principal Contractor could clear the site whenever explosives are being transported, set or fired.

Good Practice

The Principal Contractor in conjunction with the Designer relocated the excavation on this project to enable battering to be used rather than sheet piling adjacent to a roadway. This provided suitable and sufficient edge protection to prevent plant, vehicles and personnel falling into the excavation.

Guidance:
Health and safety in construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

Cofferdams and caissons

(1) A cofferdam or caisson must be—
(a) of suitable design and construction;
(b) Appropriately equipped so that Workers can gain shelter or escape if water or materials enter it; and (c) properly maintained.

(2) A cofferdam or caisson must not be used to carry out construction work unless—
(a) the cofferdam or caisson and any work equipment and materials which may affect its safety have been inspected by a competent person—
(i) at the start of the shift in which the work is to be carried out; and
(ii) after any event likely to have affected the strength or stability of the cofferdam or caisson; and
(b) the person who carried out the inspection is satisfied that construction work can be safely carried out there.

(3) Where the person carrying out an inspection informs the person on whose behalf the inspection is carried out of any matter about which they are not satisfied (under regulation 24(1)), construction work must not be carried out in the cofferdam or caisson until the matter has been satisfactorily remedied.

Should
Principal Contractors should assess fitness of all Workers who may be required to follow the evacuation process.

Could
Principal Designer could assist the temporary works Designer by checking permanent works design allows room for evacuation routes.

Good Practice

When working in a confined space the Principal Contractor on this scheme installed two egress routes to allow rapid evacuation if there was water ingress or a gas alarm sounded.

Guidance:
Health and safety in construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION 24

Reports of inspections

(1) Where a person who carries out an inspection under regulation 22 or 23 is not satisfied that construction work can be carried out safely at the place inspected, that person must—

(a) inform the person on whose behalf the inspection was carried out, before the end of the shift within which the inspection is completed, of the matters that could give rise to a risk to the safety of any person; and

(b) prepare a report which must include—

(i) the name and address of the person on whose behalf the inspection was carried out;

(ii) the location of the place of construction work inspected;

(iii) a description of the place of construction work or part of that place inspected (including any work equipment and materials);

(iv) the date and time of the inspection;

(v) the details of any matter identified that could give rise to a risk to the safety of any person;

(vi) details of any action taken as a result of any matter identified in paragraph (v);

(vii) the details of any further action considered necessary; and (viii) the name and position of the person making the report.

(c) provide the report or a copy of it, to the person on whose behalf the inspection was carried out, within 24 hours of completing the inspection to which the report relates.

(2) Where the person who carries out an inspection works under the control of another (whether as an employee or otherwise) the person in control must ensure the person who carries out the inspection complies with the requirements of paragraph (1).

(3) The person on whose behalf the inspection was carried out must—

(a) keep the report or a copy of it available for inspection by an inspector for the Executive—

(i) at the site where the inspection was carried out until the construction work is completed; and

(ii) after that for 3 months; and send to the inspector such extracts from or copies of it as the inspector may from time to time require.

(4) This regulation does not require the preparation of more than one report where more than one inspection is carried out under regulation 22(4)(a)(i) or 23(2)(a)(i) within a 7 day period.

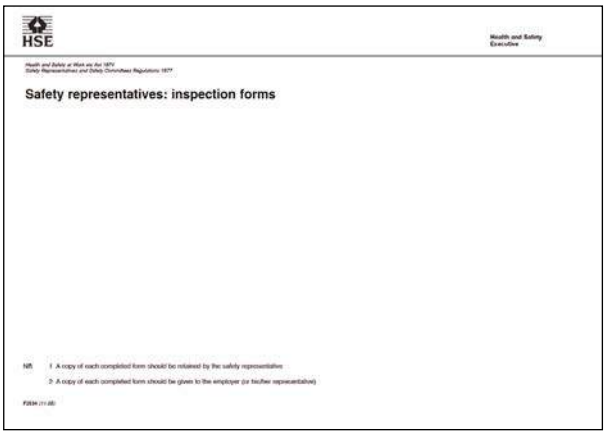
Should

Principal Contractor should ensure that he has a system in place whereby any person carrying out inspection reports matters of concern or faults to the relevant manager / supervisor.

Could

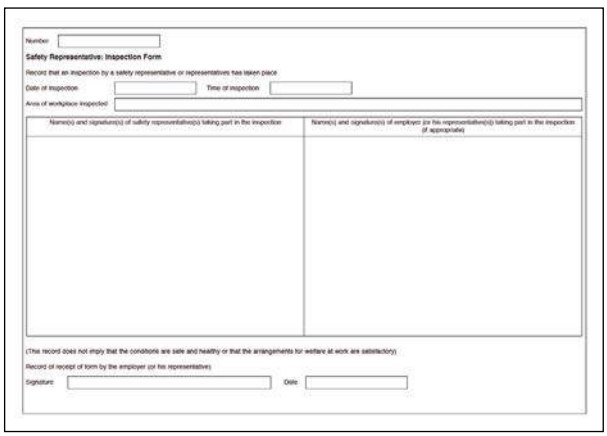
Principal Contractor could appoint other members of the project team to carry out additional inspections throughout the duration of the works.

Inspections of the workplace - *Available on the HSE website, see guidance below.*


HSE

Health and Safety Executive

Safety representatives: inspection forms


Safety Representative: Inspection Form

Guidance:
Inspections of the workplace
http://www.hse.gov.uk/involvement/inspections.htm

Energy distribution installations

(1) Where necessary to prevent danger, energy distribution installations must be suitably located, periodically checked and clearly indicated.

(2) Where there is a risk to construction work from overhead electric power cables—
(a) they must be directed away from the area of risk; or
(b) the power must be isolated and, where necessary, earthed.

(3) if it is not reasonably practicable to comply with paragraph (2) (a) or (b), suitable warning notices must be provided together with one or more of the following—
(a) barriers suitable for excluding work equipment which is not needed; (b) suspended protections where vehicles need to pass beneath the cables; or (c) measures providing an equivalent level of safety.

Should
Clients should clearly identify all services as part of pre-construction information. This may require a site survey if service drawings cannot be relied on.

Could
Clients and Principal Designers could arrange for permanent services to be provided early.

Good Practice

While working in an urban environment the Client arranged for overhead cables which could not be diverted, to be shrouded before works started. This allowed the Principal Contractor to start work on time and complete the works within the time restrictions of a road closure notice.

Guidance:
Avoiding danger from overhead power lines
http://www.hse.gov.uk/pubns/gs6.pdf

REGULATION 25 (4)

Energy distribution installations

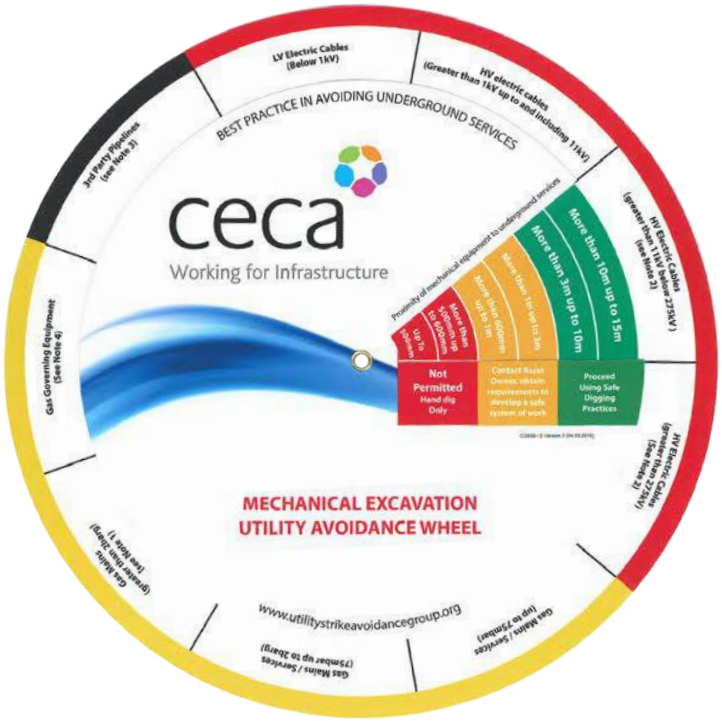
(4) No construction work which is liable to create a risk to health or safety from an underground service, or from damage to or disturbance of it, is to be carried out unless suitable and sufficient steps (including any steps required by this regulation) have been taken to prevent the risk, so far as is reasonably practicable.

Should
Clients should clearly identify all services as part of pre-construction information. This may require a site survey if service drawings cannot be relied upon.

Could
Clients and Principal Designers could arrange for permanent services to be provided early.

Good Practice

Where a Client has identified all services and passed information to Principal Designer and Principal Contractor, the Principal Contractor's risk assessment and use of CECA's proximity wheel showed that the only way to avoid service damage was to use vacuum excavation techniques.



Guidance:
Avoiding danger from underground services
http://www.hse.gov.uk/pubns/books/hsg47.htm

Prevention of drowning

(1) Where, in the course of construction work, a person is at risk of falling into water or other liquid with a risk of drowning, suitable and sufficient steps must be taken to—

(a) prevent, so far as is reasonably practicable, the person falling;

(b) minimise the risk of drowning in the event of a fall; and

(c) ensure that suitable rescue equipment is provided, maintained and, when necessary, used so that a person may be promptly rescued in the event of a fall.

(2) Suitable and sufficient steps must be taken to ensure the safe transport of any person conveyed by water to or from a place of work.

(3) Any vessel used to convey any person by water to or from a construction site must

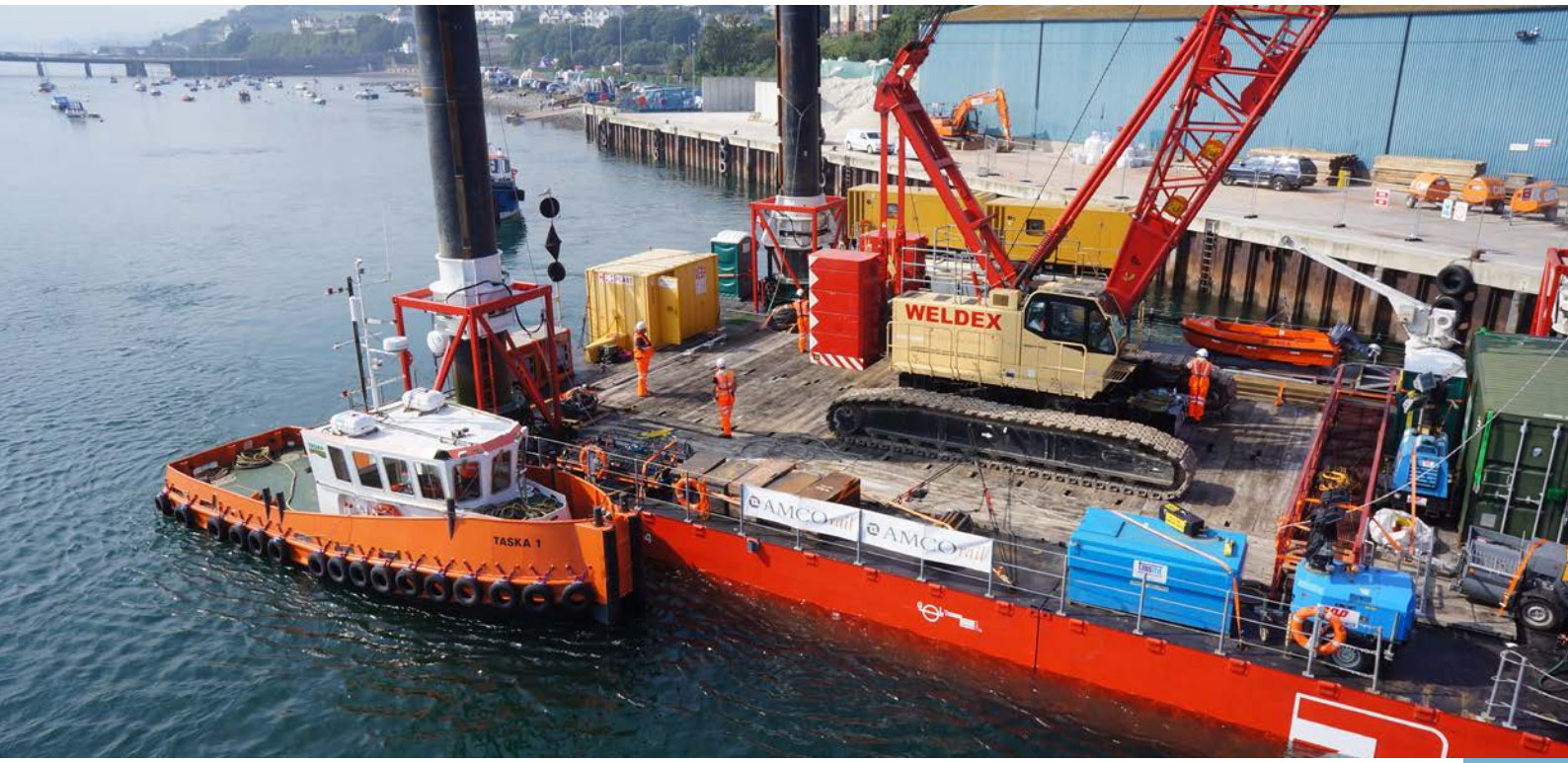
(4) not be overcrowded or overloaded.

Should
Principal Contractors should only use experienced marine Workers who are trained and competent with the vessels and equipment being used.

Could
Principal Contractor could utilise the expertise of the marine Contractor to develop an incremental training programme for inexperienced Workers.

Good Practice

During transit to the work site the number of Workers was kept to a minimum. Once the jackup rig was in position workboats were used to transport the workforce, all open edges were protected, life jackets worn at all times and the rescue boat slung ready for launch.



Guidance:
Health and Safety in Construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

27

Traffic routes

(1) A construction site must be organised in such a way that, so far as is reasonably practicable, pedestrians and vehicles can move without risks to health or safety.

(2) Traffic routes must be suitable for the persons or vehicles using them, sufficient in number, in suitable positions and of sufficient size.

(3) A traffic route does not satisfy paragraph (2) unless suitable and sufficient steps are taken to ensure that—
- *(a) pedestrians or vehicles may use it without causing danger to the health or safety of persons near it;*
- *(b) any door or gate for pedestrians which leads onto a traffic route is sufficiently separated from that traffic route to enable pedestrians to see any approaching vehicle or plant from a place of safety;*
- *(c) there is sufficient separation between vehicles and pedestrians to ensure safety or, where this is not reasonably practicable—*
  - *(i) other means for the protection of pedestrians are provided, and*
  - *(ii) effective arrangements are used for warning any person liable to be crushed or trapped by any vehicle of its approach;*
- *(d) any loading bay has at least one exit for the exclusive use of pedestrians; and*
- *(e) where it is unsafe for pedestrians to use a gate intended primarily for vehicles, at least one door for pedestrians is provided in the immediate vicinity of the gate, is clearly marked and is kept free from obstruction.*

(4) Each traffic route must be—
- *(a) indicated by suitable signs where necessary for reasons of health or safety;*
- *(b) regularly checked; and*
- *(c) properly maintained.*

(5) No vehicle is to be driven on a traffic route unless, so far as is reasonably practicable, that traffic route is free from obstruction and permits sufficient clearance.

Should
On occupied sites Client should review traffic plans with the Principal Contractor on a regular basis as he has duties under CDM and other legislation.

Could
Client could stipulate traffic management as part of the contract.

Good Practice

This is a good example of where a Client worked with the Principal Contractor to ensure that sufficient space was allowed within the site boundaries so that a traffic plan could be developed ensuring segregation of plant and pedestrians.

Guidance:
Health and Safety in Construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

Vehicles

(1) Suitable and sufficient steps must be taken to prevent or control the unintended movement of any vehicle.

(2) Where a person may be endangered by the movement of a vehicle, suitable and sufficient steps to give warning to any person who is liable to be at risk from the movement of the vehicle must be taken by either or both—
(a) the driver or operator of the vehicle, or
(b) where another person is directing the driver or operator because, due to the nature of the vehicle or task, the driver or operator does not have full visibility, the person providing directions.

(3) A vehicle being used for the purposes of construction work must, when being driven, operated or towed be—
(a) driven, operated or towed in such a manner as is safe in the circumstances; and
(b) loaded in such a way that it can be driven, operated or towed safely.

(4) A person must not ride, or be required or permitted to ride, on any vehicle being used for the purposes of construction work otherwise than in a safe place in that vehicle provided for that purpose.

(5) A person must not remain, or be required or permitted to remain on any vehicle during the loading or unloading of any loose material unless a safe place of work is provided and maintained for that person.

(6) Suitable and sufficient measures must be taken to prevent a vehicle from falling into any excavation or pit, or into water, or overrunning the edge of any embankment or earthwork.

Should
Principal Contractor should programme works to keep numbers of Workers to a minimum whilst major plant movements are taking place.

Could
Principal Contractors could ban all pedestrians from plant movement areas. Anyone with a need to enter plant areas would need to be in a vehicle.

Good Practice

Prior to commencement on site the Contractor selected a dumper with cab to provide the same weather protection as other plant.

Guidance:
Health and Safety in Construction - Section 3
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

29

Prevention of risk from fire, flooding or asphyxiation

(1) 1) Suitable and sufficient steps must be taken to prevent, so far as is reasonably practicable, the risk of injury to a person during the carrying out of construction work arising from—

(a) fire or explosion;

(b) flooding; or

(c) any substance liable to cause asphyxiation.

Should

On occupied sites the Principal Contractor should adopt the Client's procedures to ensure there is no confusion or watering down of existing procedures.

Could

Clients on occupied sites could share their rescue teams with Contractors to reduce the costs of training.

Good Practice

On this large scheme the Principal Contractor provided mobile first aid/fire points for use around this linear site. Locations were identified in the site safety plan.

Guidance:
Health and Safety in Construction - Section 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION
30

Emergency procedures

(1) Where necessary in the interests of the health or safety of a person on a construction site, suitable and sufficient arrangements for dealing with any foreseeable emergency must be made and, where necessary, implemented, and those arrangements must include procedures for any necessary evacuation of the site or any part of it.

(2) In making arrangements under paragraph (1), account must be taken of—
(a) the type of work for which the construction site is being used;
(b) the characteristics and size of the construction site and the number and location of places of work on that site;
(c) the work equipment being used;
(d) the number of persons likely to be present on the site at any one time; and
(e) the physical and chemical properties of any substances or materials on, or likely to be on, the site.

(3) Where arrangements are made under paragraph (1), suitable and sufficient steps must be taken to ensure that—
(a) each person to whom the arrangements extend is familiar with those arrangements; and
(b) the arrangements are tested by being put into effect at suitable intervals.

Should
Principal Contractors should regularly test evacuation procedures and ensure clarity during induction.

Could
Principal Contractors could bring in external resources (including the Client), to monitor evacuation exercises.

Good Practice

On a project that included work in confined spaces the Principal Contractor trained two rescue teams to ensure there was always emergency cover for tower crane rescue.

Guidance:
Health and Safety in Construction - Section 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

31

Prevention of risk from fire, flooding or asphyxiation

(1) Where necessary in the interests of the health or safety of a person on a construction site, a sufficient number of suitable emergency routes and exits must be provided to enable any person to reach a place of safety quickly in the event of danger.

(2) The matters in regulation 30(2) must be taken into account when making provision under paragraph (1).

(3) An emergency route or exit must lead as directly as possible to an identified safe area.

(4) An emergency route or exit and any traffic route giving access to it must be kept clear and free from obstruction and, where necessary, provided with emergency lighting so that it may be used at any time.

(5) Each emergency route or exit must be indicated by suitable signs.

Should
Principal Contractors should reduce the chance of confusion by reducing changes to routes during the construction phase.

Could
Clients could assist Contractors by allowing use of his escape routes, safe areas and head count system.

Good Practice

On this busy site the Principal Contractor liaised with the Client to ensure that individual emergency procedures did not clash and traffic and pedestrian routes were clearly identified.

Guidance:
Health and Safety in Construction - Section 1 & 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION
32

Fire detection and fire-fighting

(1) Where necessary in the interests of the health or safety of a person on a construction site, suitable and sufficient fire-fighting equipment and fire detection and alarm systems must be provided and located in suitable places.

(2) The matters in regulation 30(2) must be taken into account when making provision under paragraph (1).

(3) Fire-fighting equipment or fire detection and alarm systems must be examined and tested at suitable intervals and properly maintained.

(4) Fire-fighting equipment which is not designed to come into use automatically must be easily accessible.

(5) Each person at work on a construction site must, so far as is reasonably practicable, be instructed in the correct use of fire-fighting equipment which it may be necessary for the person to use.

(6) Where a work activity may give rise to a particular risk of fire, a person must not carry out work unless suitably instructed.

(7) Fire-fighting equipment must be indicated by suitable signs.

Should
Principal Contractors should include fire-fighting equipment as part of the induction and task briefing process.

Could
Clients via their Principal Designer could bring forward the installation of permanent fire-fighting systems.

Good Practice

On this rail project the Principal Contractor installed comprehensive fire and emergency points at various locations along this linear site.

Guidance:
Health and Safety in Construction - Section 2 - http://www.hse.gov.uk/pubns/priced/hsg150.pdf
Fire safety in construction - http://www.hse.gov.uk/pubns/books/hsg168.htm

REGULATION

33

Fresh air

(1) Suitable and sufficient steps must be taken to ensure, so far as is reasonably practicable, that each construction site or approach to a construction site has sufficient fresh or purified air to ensure that the site or approach is safe and without risks to health or safety.

(2) Any plant used for the purpose of complying with paragraph (1) must, where necessary for reasons of health and safety, include an effective device to give visible or audible warning of any failure of the plant.

Should
Principal Contractors should engage with specialist Contractors early enough to draw up a plan that will protect all Contractors and not require systems to be changed during construction.

Could
Clients and Principal Designers could accelerate the fitting of permanent systems where it was a benefit to all.

Good Practice

On a tunnel refurbishment scheme the Principal Contractor chose large volume forced ventilation through a tunnel rather than localised exhaust ventilation to reduce the level of airborne dust.

Guidance:
Workplace health, safety and welfare
http://www.hse.gov.uk/pubns/indg244.pdf

REGULATION
34

Temperature and weather protection

(1) Suitable and sufficient steps must be taken to ensure, so far as reasonably practicable, that during working hours the temperature at a construction site that is indoors is reasonable having regard to the purpose for which that place is used.

(2) Where necessary to ensure the health or safety of persons at work on a construction site that is outdoors, the construction site must, so far as is reasonably practicable, be arranged to provide protection from adverse weather, having regard to;
(a) the purpose for which the site is used; and
(b) any protective clothing or work equipment provided for the use of any person at work there.

Should
Clients, Principal Designers, Principal Contractors and Contractors should work together to programme works to reduce exposure to extreme high and low temperatures to a minimum.

Could
Employers could provide a selection of PPE to suit all. Workers need to be part of the selection process.

Good Practice

Men working in extremely cold temperatures are protected by full arctic survival suits. Working time is limited to a maximum of 20 minutes before they have a 20 minute break in a heated cabin.

Guidance:
Personal protective equipment (PPE) at work - http://www.hse.gov.uk/pubns/indg174.pdf
Workplace health, safety and welfare - http://www.hse.gov.uk/pubns/indg244.pdf
Health and Safety in Construction - Section 3 - http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION

35

Lighting

(1) Each construction site and approach and traffic route to that site must be provided with suitable and sufficient lighting, which must be, so far as is reasonably practicable, by natural light.

(2) The colour of any artificial lighting provided must not adversely affect or change the perception of any sign or signal provided for the purposes of health or safety.

(3) Suitable and sufficient secondary lighting must be provided in any place where there would be a risk to the health or safety of a person in the event of the failure of primary artificial lighting.

Should
Principal Contractors should agree and install lighting with Contractors before they are due on site.

Could
Clients and Principal Designers could arrange for permanent lighting to be installed early. This could help with noise reduction if Contractors are planning to use generators.

Good Practice

On this urban infrastructure project, the Principal Contractor knew there would be an element of night working. They used lights which pointed away from all the nearby domestic properties so as not to inconvenience their neighbours.

Guidance:
Health and Safety in Construction - Section 2
http://www.hse.gov.uk/pubns/priced/hsg150.pdf

REGULATION
36

Enforcement in respect of fire

The enforcing authority for regulations 30 and 31 (so far as those regulations relate to fire) and regulation 32, in respect of a construction site which is contained within or forms part of premises occupied by persons other than those carrying out construction work, or any activity related to this work, is—

(a) in England and Wales the enforcing authority within the meaning of article 25 of the Regulatory Reform (Fire Safety) Order 2005 in respect of premises to which that Order applies; or

(b) in Scotland the enforcing authority within the meaning of section 61 of the Fire (Scotland) Act 2005 in respect of premises to which Part 3 of that Act applies.

Should
Regulation will be enforced by the local fire and rescue services. If there is any doubt Principal Contractor should contact them for clarification.

Could
Principal Contractor could invite ambulance service and the local fire and rescue services to visit the site.

Good Practice

It is generally good practice for the Principal Contractor to invite the local fire and rescue services to witness emergency procedures training and give their advice.

Guidance:
Personal protective equipment (PPE) at work - http://www.hse.gov.uk/pubns/indg174.pdf
Workplace health, safety and welfare - http://www.hse.gov.uk/pubns/indg244.pdf
Health and Safety in Construction - Section 3 - http://www.hse.gov.uk/pubns/priced/hsg150.pdf

Construction (Design and Management) Regulations 2015

A good practice guide for the civil engineering sector

CECA National, 1 Birdcage Walk, London, SW1H 9JJ