

# Construction (design and management) (cdm) regulations 2007



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### **The 2007 Regulations**

The key aim of CDM 2007 is to incorporate health and safety into management of all construction projects as well as to encourage everyone else in the project to give a combined effort to:

- Improve the planning and management of projects from the very start
- Identify risks early on
- Target effort where it can do the most good in terms of health and safety
- Discourage unnecessary bureaucracy.

The drafters' stated goal to remove useless bureaucracy is a definite advance on previous regulations such as manual paperwork that contributes little to risk management and such a waste of resources (according to the ACoP) may prove to be a distraction from actual business leading to risk reduction and risk management. The removal of requirement for a designated planning supervisor and the introduction of the CDM coordinator role is also seen as a positive step by most people.

### **The client's role**

CDM 2007 stipulates that clients must not " appoint or engage a CDM coordinator, designer, principal contractor or contractor unless he has taken reasonable steps to ensure that the person to be appointed or engaged is competent" and must then ensure that they co-operate and co-ordinate their efforts.

The Approved Code of Practice contains detailed information on the process and procedures that may be followed when determining the competence of

the various post holders mentioned above. Clients are expected to make appointments to the above roles at the first opportunity in order to contribute to risk reduction throughout planning stages.

It is generally accepted that impractical deadlines as well as failure to assign adequate funds are regarded as two major factors leading to poor control or increased project risk. As such, clients need to consider all resources such as staff equipment and time required for planning and conducting the work correctly when making appointments and inform prospective candidates accordingly.

For all construction projects, CDM 2007 says the client needs to:

- Appoint the right people: competent designers and builders with sufficient resources, who are members of a reputable trade association
- Allow adequate time; rushed projects are unsafe, poorly planned and poor quality
- Provide adequate information to their teams, to enable them to design and plan a structure that is safe to build, safe to use and safe to maintain
- Ensure they communicate and cooperate with their teams throughout the project, especially during the design stage when issues such as buildability, usability and maintainability of the (finished) structure are up for discussion
- Ensure suitable management arrangements, using practicable risk assessments and workable method statements

- Make sure adequate welfare facilities are provided on site before work starts
- Ensure workplaces are designed to comply with the Workplace (Health, Safety and Welfare) Regulations 1992.

For construction projects that must be notified to the HSE under CDM – that is, any project scheduled for more than 30 days or involves more than 500 days of work when all workers' time is totalled – the client also needs to do the following:

- Appoint a CDM coordinator to advise and assist on CDM duties (but note that CDM 2007 does not require the CDM coordinator to supervise or monitor work on site)
- Appoint a principal contractor to plan, manage and coordinate construction
- Ensure the principal contractor produces a construction phase health and safety plan outlining the key arrangements so as to ensure work is carried out safely and without risks to health; work should not start on site until there is an adequate plan
- Keep the health and safety file: at the end of the project, the CDM coordinator should hand over the health and safety file to the client (ideally at the topping-out ceremony). The file is a record of useful health and safety information to assist the client in managing risk during maintenance and repair, additional construction work, or even demolition. It should be kept safe (preferably in the building), made available to anyone who needs to alter or maintain the structure, and kept up to date as circumstances change.

**Coordinator role**

According to L144 Approved Code of Practice to CDM 2007, the critical role of a CDM coordinator is to reduce risks of being hurt on construction sites.

The client has to ensure that a coordinator is appointed up to the end of construction phase of that venture, although the actual company/individual carrying out the role can change.

Where no such appointment is made, the client themselves will be held to take on the role of CDM coordinator and accordingly will have to abide by duties imposed in regulations 20 and 21 concerning the CDM coordinator.

The duties of the CDM coordinator are to:

- Give suitable and sufficient advice and assistance to clients to enable them to comply with their duties;
- Notify the HSE about the project;
- Co-ordinate design work, planning and other preparation for construction where relevant to health and safety;
- Identify and collect the pre-construction information and advise the client if surveys need to be commissioned to fill significant gaps;
- Promptly provide in a convenient form to those involved with the design of the structure and to every contractor who may be or has been appointed by the client, such parts of the preconstruction information that are relevant;
- Manage the flow of health and safety information between clients, designers and contractors;

- Advise the client on the suitability of the initial construction phase plan and the arrangements made to ensure that welfare facilities are on site from the start; and
- Produce or update a relevant, user friendly, health and safety file suitable for future use at the end of the construction phase.

### **Duty details**

The CDM coordinator is required to help the client to develop an appropriate management arrangement, and needs to advise clients on adequacy of appointed management. There are a number of issues that require consideration including ensuring that:

- The client is aware of their duties and understands what is expected of them;
- The principal contractor has been given enough time to plan and prepare for the work;
- Suitable arrangements are in place for developing the plan to cover risks that arise as the work progresses;
- The principal contractor has made arrangements for providing welfare facilities on site from the outset; and
- The PC has prepared a construction phase plan that addresses the main risks during the early stages of construction.

When they work on notifiable projects, all contractors must:

- Check the client is aware of their duties under CDM 2007 and that a CDM coordinator has been appointed

- Check the CDM coordinator has notified the HSE about the project before work starts
- Cooperate with the principal contractor in planning and managing work, including agreeing on site rules and reasonable directions
- Provide details to the principal contractor of any subcontractors they engage in connection with carrying out the work
- Provide any information needed for inclusion in the health and safety file
- Promptly inform the principal contractor of any problems with or concerns about either the initial or construction phase health and safety plan
- Promptly report to the principal contractor any injuries, accidents, occupational diseases or dangerous occurrences.

Clients are required to make available project related all health and safety information to the coordinator so that this may be passed onto prospective contractors and designers. A comprehensive list of information is given in the ACoP as an appendix. The information required includes details of the project and the management arrangements, along with information in respect of hazards such as location of utility services, information on existing structures and ground conditions.

### **The principal contractor's role**

Once appointed on a notifiable project, the principal contractor's duties are to:

- Plan, manage and monitor the construction phase in liaison with all contractors and subcontractors

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- Prepare, develop and implement a written construction phase health and safety plan and site rules; the initial plan should be completed and in place before the construction phase begins
- Ensure that all contractors and subcontractors are given copies of, and made aware of, their relevant parts of the plan
- Make sure there are adequate welfare facilities on site from the start of the project and that they are maintained and kept clean throughout the construction phase
- Check the competence of all appointed contractors and subcontractors
- Ensure everyone on site has a health and safety induction and receives any additional information, instruction and training deemed necessary to undertake their work in a safe and healthy manner
- Consult all workers on site regularly, ensure the site is secured at all times and
- Liaise with the CDM coordinator about any ongoing design work.

### **Appointing the coordinator**

CDM 2007 requires appointment of coordinator to occur at earliest once the preliminary designs or related groundwork for construction project has started. Clearly, appointment of the coordinator will require some form of judgement to be made in terms of whether or not a project is likely to be notifiable. As soon as is practicable is not defined, but the ACoP requires the coordinator to be in a position of aligning health and safety aspects of designs and recommend compatibility and suitability of this design work. In accord, the coordinator needs to be appointed before any major detailed design is worked on. This major detailed design is considered as the

preparation for early concept of both implementation and design during strategic briefs (typically Stages A and B of Royal Institute of British Architects plan of work stages).

The reason for this is that as a project progresses the level of difficulty for making changes increases which would reduce risks. The coordinator can be a company or an individual or appointed independently or a combination with other roles (such as project manager or designer). However, the ACoP states that where roles are combined and performed by a single individual, it becomes critical for the CDM coordinator to have adequate independence for carrying out tasks in an effective manner. This can often be the case for larger projects, where tasks may be 'shared out', but in these circumstances, it is significant to ensure that coordinator's duties are clearly laid out and discharged.

### **Assessing competence**

As with other appointments, coordinators' competence must be assessed. As well as the necessary technical expertise, the coordinator will require sufficient social skills so as to promote cooperation between project designers and others. In particular, the ACoP highlights that the coordinator needs sufficient knowledge of:

- Health and safety in construction work;
- The design process; and
- The importance of co-ordination of the design process.

The level of education needs to be germane to the project and the client has to consider complexity and size of construction project as well as the type of

risks that may emerge. The coordinator does not necessarily have to be a designer, but they do need to have sufficient knowledge of design process so as to better analyse health and safety implications of it. Appendix 4 of the ACoP provides guidance as to the assessment process for both organisations that may be acting as a coordinator, as well as individuals within the organisation or who are acting in a stand-alone capacity. Typically, the evidence needed to demonstrate competence will include:

- The number of persons engaged in the project who have passed a construction health and safety assessment (eg CITB Construction Skills);
- Evidence of health and safety knowledge (eg NEBOSH Construction Certificate);
- Membership of professional bodies with level of membership commensurate with the complexity of the construction project;
- Evidence of continuing professional development; and
- Evidence of experience in the particular type of work to be undertaken.

### **The designer's role**

The designers' duties according to CDM Regulations are to:

- Inform the client of client duties under the CDM Regulations and the requirements of the accompanying ACoP (this is still the case under CDM 2007)
- Ensure the design considers the need to avoid foreseeable risks to construction workers and others affected, such as cleaners (still the case under CDM 2007 and the ACoP)

- Combat at source risks to the health and safety of construction workers and others affected (still the case under CDM 2007 and the ACoP)
- Give priority to control measures that protect all on site – not just individuals (still the case under CDM 2007 and the ACoP)
- Ensure that the design includes adequate information about construction site hazards (still the case under CDM 2007 and the ACoP)
- Cooperate with the planning supervisor and with other designers (not the case under CDM 2007 and the ACoP, as the planning supervisor role has now been replaced by the CDM coordinator, whose main role is to provide the client with a key project adviser on construction health and safety risk management matters; hence the designer needs to liaise with the CDM coordinator as well as with other designers).

The importance of the designer's role in terms of the ability to design out hazards from the start of any project (risk elimination/avoidance) and the need to specify the use of safer materials and construction methods. The designer's role is also important to design the building/structure to be safe to use and maintain and also to provide fundamental information that is to be included in health and safety plan as well as in file.

In all construction projects, designers are required to reduce hazards risks during the design stage and present sufficient information regarding effectively combating the remaining (foreseeable) risks. While, for all notifiable projects, designers also have to check that the client has knowledge of their duties under CDM 2007 and also that a CDM coordinator has been timely appointed and provides required information for health and safety file.

In line with CDM 2007, designers are not responsible for providing information on unforeseeable risks which cannot realistically be anticipated simply from design brief. Designers are not instructed specify construction methods however, they may do so in cases where the design requires particular construction sequence as well as in cases of a competent contractor requiring such information. Designers also do not have to practice health and safety management functions as they are exercised by contractors or others neither do they have to be concerned in relation to trivial risks.

### **Everyone else's roles**

Anyone else on site, who doesn't fall into the categories above listed so far, must check their own competence, assist others and organize their work in order to make sure that health and safety of all construction workers and others (such as members of the public) who may possibly be affected by their work activities. Also, they need to report evident risks and follow through requirements laid out in Schedule 3 (workplace inspection reports) and Part 4 (health and safety duties on construction sites) of CDM 2007 for any work under their control. They also need to apply general protection principles as specified in Schedule 1 to the Management of Health and Safety at Work Regulations 1999 (Management Regulations) when carrying out their duties.

The principles of protection listed in the Management Regulations should be used by all dutyholders under CDM 2007 and direct how they identify and implement precautions necessary to control construction and demolition risks. The principles are:

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- Avoiding risks
- Evaluating those that cannot be avoided
- Combating the risks at source
- Adapting the work to the individual, especially in the design of workplaces, the choice of work equipment and the choice of working and production methods, with a view to alleviating monotonous work and work at a predetermined work rate, and to reducing their effects on health
- Adapting to technical progress
- Replacing the dangerous with the non-dangerous or the less dangerous
- Developing a coherent overall prevention policy which covers technology, organisation of work, working conditions, social relationships, and the influence of factors relating to the working environment
- Giving collective protective measures priority over individual protective measures
- Giving appropriate instructions to employees.

However, it is worth mentioning there here there is no explicit mention of the issue and use of personal protective equipment (PPE) anywhere in general principles of protection, reinforcing the view that PPE is not an acceptable control measure but merely a barrier (often temporary) between people and hazards.

### **Issues with Coordinator**

The CDM coordinator should advise clients on carrying out competency assessments. But frequently the CDM coordinator is appointed at the same

time as the principal contractor and often it is the same company. Clearly some earlier advice would be useful to the unsophisticated client when choosing the CDM coordinator and the CDM coordinator should be appointed before anyone else is engaged.

In reality, only an appointee can know whether they have the necessary skills and expertise to be truly competent and the client may not have asked about competence in the tender documents. While appointees can be asked to give warranties as to their competency, capacity and resources, these are of little use if there is an incident, a delay or a prosecution.

In addition, companies will often put forward their best people to win the contract, but those people might not end up actually doing the work. One way to safeguard against this is to include clauses in the contract of appointment specifying minimum qualifications/competencies/experience levels, or even naming key people.

### **The planning period**

CDM 2007 requires clients to allocate enough time before construction starts in order to facilitate the planning and preparation. As part of the preconstruction information that clients must provide to the contractors they appoint, they must inform them of minimum time beforehand the construction phase that is basically plans the preparation of construction work. Some standard construction contracts require this CDM planning period to be stipulated in the contract but this is still not common practice. In many cases, the client's lack of knowledge means they are not specifying

any planning period and simply giving an end date for works to be completed.

Clients are obliged under CDM to provide the “ pre-construction information” - that is, information they have already or what is realistically attainable.

This might include information about the existing site and structures, including location of services, storage of hazardous materials or the presence of asbestos. Where the information is vital to planning works safely (a ground survey, for example), frequently the client might not already have this information but it would be reasonable for them to obtain it. Uncertainty as to whose responsibility it is to provide reasonably obtainable material can lead to contractors taking risks where timescales are tight.

In cases of gaps in information, it may be the client’s task to make sure that they present information, but it may be the contractors who are contractually obliged to obtain it. Unsophisticated clients might not have the information, they may not seek the advice they need and they might not want to pay for additional surveys. If clients get the issue of information requests sorted out early on, as part of the procurement or tendering process, they can minimise the risks of a contractor delay. If principal contractors get the issue of information flow sorted out early on, they will minimise the risk from being surprised by site hazards and may even impress the client with their efficiency.

However, over the last six months (and even under the old CDM Regulations), a different approach has been common. The principal contractor is frequently required to take the risk of commissioning surveys

and to obtain other relevant information which, in many cases, the client should already have. In addition, clients who are tenants of a site will not always seek information from the land or building owner, or tell the principal contractor to ask the owner for further information.

Though managing things in this old way is contrary to the spirit of CDM 2007, it should not be problematic so long as the information is actually obtained, collated and provided to the relevant parties early enough to allow for the planning and preparation of the construction works. However, where timescales are tight, risks are likely to be taken which could jeopardise delivery dates as well as profit.

### **Costs of CDM 2007 Implementation**

HSC's Construction Industry Advisory Committee ('CONIAC') suggests that the most optimum manner of delivering change is to revise CDM Regulations '94 and also the CHSW Regulations '96 along with supporting ACOP. Such decision reflects experience from past corrective attempts that draw on productive aspects of these measures and is regarded by the construction industry as an acceptable response that adequately addresses the many questions raised, whilst, holding on to commonly accepted principles of CDM Regulations '94 putting into action provisions of TCMS Directive and including Better Regulation principles.

Collective costs of implementing CDM Regulations '07 have been anticipated between £1.0 and £2.8 billion while, quantified benefits such as safety benefits and productivity improvements are expected within £1.96 to £5.9 billion. However, the estimated health and safety benefits are uncertain.

Moreover, it is improbable for them to be smaller than the figure included within the general estimate as health benefits are not quantified.

Additionally, the costs to familiarise clients with CDM Regulations '07 have not been estimated as the number of clients per year is not recorded. However, it is reported that annually 65% of clients are classified as "repeat clients" and are also assumed to be involved in five projects per year while, the remaining 35% of clients are the only ones involved in a single project. Out of which 70% are classified as "commercial clients". Supposing client familiarisation with CDM Regulations '07 takes up to eight hours while, receiving an average client wage and a supposed 100% compliance (an unlikely eventuality), then, the present cost of familiarisation is around £57 million.

The objectives that must be met on any construction project such as quality, cost and time objectives can be listed as major priorities. However, the key to achieving these objectives is usually the strength of the relationship with the client. This requires a sound understanding of their requirements.

Construction companies tend to not work with a client if the relationship is anticipated to be adversarial and instead choose to work as collaborative partners in order to achieve successful project outcomes.

It is also important to establish a strong and effective project team by choosing people that are well suited to the specific project. This needs very careful consideration in relation to complex projects, such as the Olympic Park development. Previously, relationships between designers, engineers and quantity surveyors were often adversarial, while, successful projects

require the team members to work in a collegiate fashion with mutual respect for one another so that they can each perform at their best.

The 'Constructing Excellence' agenda has not been sufficiently embraced by the industry as a whole, although there are some good examples of projects that have successfully adopted the initiatives. For instance, private construction companies have embraced ideas such as standardisation to drive down cost and increase value. There have also been similar initiatives in the public sector. A good example is the MOD's Single Living Accommodation Modernisation programme ('SLAM') which sets out to upgrade the worst service personnel accommodation by 2012.

In light of these positive examples, it is possible for the industry as a whole to adopt better practice and achieve greater success. Indeed, there are considerable financial pressures on projects in the current downturn and so it is imperative that more efficient methods are adopted to provide better value for money to clients. Adopting smarter ways of working makes it possible to reduce construction costs by 20-30% and not by cutting the contractor's margin which is usually counter-productive and does not yield significant savings in any case. Real savings can be achieved by standardising construction and simplifying the procurement process.

### **Under control**

The CDM Regulations 2007 establish a clear procedure for managing health and safety risk on construction sites. Prior to adoption of latest regulations, the HSE held a very constructive dialogue with the industry over a period of six years, which has meant that they have quickly received tacit acceptance.

Construction companies have implemented initiatives to bring about behavioural and cultural change with respect to health and safety. For instance, there are 'incident/injury free' policies on our which have been taken up by others. More can be done by the industry as a whole and it is important to share ideas on best practice. There are various initiatives that the HSE have been engaged with recently, such as worker involvement, site induction training and supervisor competency.

The HSE is much maligned in the press but that emanates from people's misunderstanding of its role. The first aspect to note is that HSE is not accountable for prescribing how activities should be conducted. In fact, the onus is on the individual or organisation carrying out such a task to undertake their own risk assessment to determine the safest method of working using the available guidance from bodies such as the HSE. The HSE's purpose is to administer health and safety law and regulations and it has an enforcement role where there have been breaches.

In light of the risks highlighted by the recent crane collapses, the Tower Crane Action Group has consulted widely and has published excellent guidance, which is available on the Strategic Forum website. Similarly, the HSE produce excellent best practice guidance notes, which are available to download on their website. The guidance is aimed at various types of business, although sadly it is not always being followed. Had the HSE guidance on running a hair salon been followed, for example, then the recently publicised incident of a hairdresser disfiguring a customer with toxic hair products could have been avoided. Additionally, organisations are not properly addressing occupational health hazards. Three thousand people a

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year die from occupational health issues and scores of people suffer from illness and disability

### **Conclusion**

Under the predecessor to CDM, the principal contractor was seen by the HSE as being in control of the whole construction site. But in practice, there were often difficulties controlling the entire site, and in particular in supervising subcontractors or the client's nominated subcontractors' work. This is still difficult to manage, and particularly where there is no contractual right to restrict attendance on site. Clients' own contractors will often turn up on their sites while principal contractors are supposed to be in control. Utilities companies or other contractors may have separate contracts with the client and the principal contractor will have to deal with these in addition to agreed site procedures and the existing programme.

In contract, a client can allow the principal contractor to control access to the site for all subcontractors and also require any subcontractors to carry out detailed supervision of their workers. In some cases, a site lease may even be appropriate. The client has to carry out competency checks on any contractors they instruct before appointment. In the contracts, it is also possible to specify who should carry out continued monitoring on the site to inform the client about ongoing competence, to restrict entry to the site or to restrict contractors' ability to tender for future work.

The ACoP clarifies that it is the client's duty to perform practical steps for ensuring suitable management arrangements carry out their duties throughout the construction project by in such a manner as to preclude risks

to health. This is in addition to the duty to ensure that principal contractors prepare a construction phase plan that complies with CDM 2007 as well as welfare installations that would be adequate throughout construction phase.

Clients aren't required actually to manage the works but they do have to check that all management arrangements are appropriate and are being followed though from the initial stages of project. The ACoP specifies that they are allowed to rely on advices of a competent CDM coordinator for making judgments as to the adequacy of the management arrangements. Clients also need to be careful to not take an active role in managing construction works because CDM 2007 places liability on those who control or run the manner in which construction projects are carried out.

Similarly, principal contractors need to make it clear who is carrying out the detailed supervision and whether they have control over the subcontractors' activities on site - if they are to seek to take advantage of the ACoP's advice that principal contractors do not have to undertake the responsibility of detailed supervisions of the contractors' work.

In summary, the management arrangements that can be detailed in the contract include:

- Control over the site
- Control over subsubcontracting without notification
- Ongoing competency checks
- Levels of detailed supervision required of subcontractors
- The time allowed for planning and preparation

- The arrangement for communicating among the dutyholders and reporting to the client
- The provision of pre-construction information and reasonably obtainable information
- The format and quality of information for the health and safety file
- The provision of the construction phase plan and all updates to the client (and cdm coordinator).

The more that is set down in the contract, the less likely any of the duties are to fall between the stools of the dutyholders. Increasing the level of detail in the contracts can help to safeguard all parties against delays caused by incidents or regulatory breaches (which can often wipe out the profit on a project). It can also be useful in removing uncertainty which in turn could help to prevent accidents or even reduce the need for any of the parties to develop a defence to a charge under health and safety legislation.

### **References**

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