



CDM 2015: 3-years on

Assessing the Construction (Design & Management)
Regulations 2015

Version 2: April 2020

CDM 2015: 3-years on

This ICE research paper examines the CDM ([Construction \(Design and Management\) Regulations 2015](#)), investigating how the new legislation has been received 3-years on from their introduction and discusses its impact upon the construction industry.

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This second version is a revised paper and replaces all previous versions



Executive Summary

After some 20+ years and 3 iterations, doubts had persisted about certain aspects of the Construction Design & Management (CDM) Regulations, which, anecdotally, were considered by some to be causing inefficiencies and a general lack of Health & Safety enhancement.

The CDM 2015 Regulations were introduced with the purpose of improving worker health and safety by helping you to:

- sensibly plan the work so the risks involved are managed from start to finish
- have the right people for the right job at the right time
- cooperate and coordinate your work with others
- have the right information about the risks and how they are being managed
- communicate this information effectively to those who need to know
- consult and engage with workers about the risks and how they are being managed¹.

Examples of industry-specific concerns include:

- The Power industry – has the designer considered the need for access in extreme weather conditions?
- Highways – has the designer considered alternative traffic flows during repairs or accident by providing removable barriers?
- Rail – has the designer considered emergency access for repairs in the event of a component failure?

Despite the aims of the CDM Regulations, the rationale for ICE to undertake this study was that there appeared to be a mixed approach to how much of the 2015 Regulations were being implemented.

Many parts of industry reportedly still missed the CDM-Coordinator role and expected the Principal Designers² to deliver in a similar fashion. Furthermore, Designers were reportedly having concerns with the conflict in their role when acting as both 'Designer' and 'Principal Designer'. Both 'Principal Designers' and 'Designers' also spoke of their uncertainty over the health and safety competency expectations/requirements and expressed concerns with Regulation 9 (Duties of designers).

The study reports on the current practical acceptance and effectiveness of the Regulations. It highlights areas of continuing concern and generally reflects how industry is coping and working with the revised Regulations.

The main conclusions of this study are that, 3 years on:

¹ [The Construction \(Design and Management\) Regulations 2015](#)

² Managing Health and Safety in Construction (Design and Management) Regulations 2015 Guidance on Regulations (L153) states that Principal Designers: "*are designers appointed by the client in projects involving more than one contractor. They can be an organisation or an individual with sufficient knowledge, experience and ability to carry out the role*". L153 further states: "*Principal designers are not a direct replacement for CDM coordinators. The range of duties they carry out is different to those undertaken by CDM coordinators under CDM 2007*".

- the construction industry has generally accepted CDM2015 and has adapted / is adapting to implementing them;
- the domestic client market is one area where compliance is far from universal with, at the lower end of the market, little or no compliance;
- the Principal Designer role is becoming accepted and more architects and engineers are becoming willing to take on the role;
- there is still a wish from some clients for an 'independent safety expert' and appointments of Principal Designers who are not the Lead Designer currently shows little sign of reducing, or alternatively, clients are appointing a safety professional to carry out what is generally called the Client CDM Advisor role. This role is not recognised by CDM2015 but is becoming common, particularly on large schemes, where an oversight role often including site inspections;
- there is little evidence of a reduction in paperwork, with designers and contractors appearing to be being led by their legal departments;
- 3-years on and there is still a learning curve within the industry with nuances of the wordings of CDM2015 becoming understood or questioned.

What our evaluation told us, was that industry believes that the CDM Regulations weren't broken and were not in need of fixing. However, the industry will always adapt to embrace new Regulations, but this costs money and time.

The key message that emerged from this research was "Enough changes, we need some stability!"

There was also a fondness for the independence of the old CDM-Coordinator role; that is being mimicked by the appointment of independent Principal Designers. Time will tell whether that persists.

Legislators need to take heed of these opinions and give the industry time to adapt to allow the new Regulations to be embedded.

Introduction

The Construction Industry

The phrase 'The Construction Industry' is used to include most of the activities that occur in the creation, maintenance and removal of the built environment. It is however recognised that it is a diverse range of activities and it is apparent that people who are working to different standards and many elements do not interact with each other.

A Brief History of the CDM Regulations

The Construction (Design and Management) Regulations 1994 at the time of their introduction were described as a 'step change'. This was primarily because of the then radical step of placing significant health and safety management duties and responsibilities on both designers and the client. The Regulations introduced the Planning Supervisor as a coordinator of health and safety issues primarily in design. The Regulations underwent revisions in 2007 and again in 2015.

In the 25-years since the CDM Regulations first appeared they have undergone 2 major changes in both content and structure, which is neither normal nor helpful, especially since the EU Directive that required their creation has not changed. The Health and Safety at Work Act, on the other hand, introduced in 1974, has had no significant changes in almost 50-years.

It is possible that a post-Brexit review of European Legislation could lead to further changes to these Regulations in the near future.

CDM 2007 – 3-years on

In 2010 ICE published a paper titled "CDM 2007 – 3-years on" which gave a 'state of play' review on the 2007 Regulations, how industry was receiving them and identifying both positive and negative issues or concerns.

The purpose of this paper is to similarly assess how industry perceives the status of the 2015 Regulations; showcasing how they have been received; how they were being applied and, additionally, suggesting possible ways forward for these Regulations.

Why change CDM 2007?

Upon publication of the CDM 2007 Regulations Government indicated that there would be an early review of their effectiveness, after 3-years instead of the normal 5-years. Led by the Health and Safety Executive (HSE) the review found widespread approval of the Regulations and that they were fit for purpose, however HSE had reservations about some aspects. Industry though did not perceive that CDM was broken but amongst other things, the coordination of design was, in many cases, not well embedded.

Additionally, there were still elements of the original EU directive that had not been properly addressed, particularly in relation to domestic clients.

To this must be added the 2010 coalition government's 'Red Tape Challenge': '2 out 1 in'; no need to 'gold plate' the EU directives and the CDM Regulations were ripe for change. It should be noted that at the time of writing, the HSE were conducting a post-implementation review of the 2015 Regulations and the two questions that

have been sent out to industry for comment indicate that financial savings were envisaged, and this was not an insignificant driver of the changes that occurred. These matters are discussed later in this paper.

Although all health and safety regulations are regularly reviewed and revised, few undergo such significant changes each time. The constant changing of these Regulations is not helpful to industry and this has been borne out in the research for this paper. There is weariness in industry at the regular rewriting of these important Regulations.

The CDM Regulations along with the Management of Health and Safety at Work Regulations 1999 (including subsequent amendments) are the lynchpin of construction safety management. Although it is difficult to evidentially find a correlation between the improving construction safety incident figures and the good practice brought about by adherence to these Regulations, it is not inconceivable that they have been a factor.

The people spoken to during this review were mainly of the opinion that the CDM Regulations 2007 were meeting the needs for construction safety planning. Time and again people felt that there were a range of political reasons behind the changes and that the HSE had delivered the Regulations required by the Government. The HSE would dispute that there has been undue political influence.

HSE's historical trends³ show a decreasing rate of fatalities and serious accidents over the period since the Regulations were first introduced. The only areas that are not showing such decreasing trends are the occupational health issues which include the likes of asbestos related diseases that relate to factors pre-dating the introduction of the CDM Regulations. Other legislation such as The Work at Height Regulations have also had an impact, so CDM cannot claim all the successes.

Objectives of this Paper

During the time this research was being conducted HSE were carrying out their customary 'Post implementation review' of the Regulations and reference (as appropriate) is made to some of the research they are carrying out.

This paper focusses on the current practical acceptance and effectiveness of the Regulations, highlighting areas of continuing concern and generally reflecting, albeit from a relatively small but targeted, balanced and knowledgeable sample, how industry is adapting to and implementing the revised Regulations.

The research was carried out without pre-conceived ideas of what might emerge, although it was envisaged that key areas of change such as the introduction of the Principal Designer, inclusion of Domestic schemes and changes to the competence requirements would be included. One area that was not foreseen, but which has been included is 'Terminology'. This was raised separately by a significant proportion of the people interviewed. Interviewees were asked a series of open questions such as "How have the changes affected your approach to health and safety management?"

The paper predominantly discusses Parts 2 and 3 of CDM 2015 Regulations

³ [Trends in work-related ill health and workplace injury \(2019\), Health & Safety Executive](#)

Research methodology

The author consulted with key people within professional institutions. However, in order to obtain a wider range of opinion, interviews were also held with clients and practitioners, HSE, Association for Project Safety, designers, contractors and trainers who are working daily on construction projects and are dealing with the Regulations. Additionally, the author spoke to small builders involved with domestic clients and colleagues who had recently been domestic clients. Finally, reference has been made to recent relevant papers and in one case an on-line lecture

The discussions have taken two forms, 'formal' when a time was arranged for an interview and 'informal' where the author took the opportunity to discuss aspects of the Regulations when an opportunity arose such as before or after project meetings or at the, for example, ICE events.

In the final analysis, apart from some of the respondents, who are working with the domestic clients, all the people who the author spoke to have accepted the changes, some with open arms and some resignedly; but there was from some an attitude of, "It wasn't broke so why did they change it again?"



Key Changes 2007 to 2015

Why the Changes?

The driver for the change was said to be to simplify the existing legislation and for the third time attempt to meet the requirements of EU Directive 92/57/EEC - Temporary or Mobile Construction Sites, which the UK has consciously sought to implement through the minimum of compliant legislation.

The EU directive includes domestic client duties which were not incorporated in the previous GB and NI regulations.

The HSE carried out an industry review starting in 2010, which although primarily complimentary of the Regulations, found that there were areas, in particular the coordination of pre-construction elements including design, which they considered would benefit from being amended.

In the research for this paper many respondents surmised that the changes had a significant element of politics behind them; some of the changes were almost certainly a consequence of “The Red Tape Challenge”, launched by the UK coalition government in 2011. A Government statement at the time said, *“For years red tape and bureaucracy have been allowed to spiral out of control. Excessive regulation is burdening businesses, hurting our economy and damaging our society.”*

This opinion appears to have been supported in the two questions sent out to industry by the HSE as part of their 3-year review of the Regulations.

Why do project costs post-CDM 2015 appear not to have decreased, even though the CDM-C role (and its related cost) is no longer required by the regulations?

Why do some projects continue to use the former external co-ordinators, i.e. from outside of the project team?

From the tone and almost surprise in the questions it is apparent that the HSE were expecting cost savings from the revised Regulations. The questions suggest that these expected savings are not being realised.

Tied up with ‘Red Tape Challenge’ is the HSE’s constant attempts to reduce or even eliminate paperwork, this again was often cited as a key reason for revising the Regulations. However, this drive is significantly negated by HSE prosecution teams homing in on ‘adequacy of paperwork’ to the extent that duty holders (contractors and designers) feel obliged to create extensive paper audit-trails. The HSE published ACoP and Guidance that was taken by many practitioners as being mandatory, resulting in inappropriate and extensive bureaucracy.

Whatever the reasons for costs savings not being realised or for a continued high level of bureaucracy it was agreed that change was needed in order to capture the domestic market where, particularly in city-centres, some complex and high-risk projects were being undertaken (e.g. basement construction under existing buildings) which under the 2007 Regulations were partially exempt.

What changed?

A brief summary of the changes is outlined below:

- An increase in Client responsibilities;
- The CDM-Coordinator role was removed and the requirement for a Principal Designer mirroring the role of the Principal Contractor, but for the pre-construction phases was introduced. The Principal Designer is required to provide less support for the Client than the CDM Coordinator was required to;
- Domestic client exemptions were removed;
- Notification thresholds and requirements were changed;
- Competence assessment requirements in the ACoP and guidance replaced with a requirement to assess Skills, Knowledge and Experience;
- Changes of some responsibilities. e.g. F10 notification; and
- Changes to the wording of the requirements relating to the designer's duty to eliminate hazards by replacing 'hazard' with 'risk'.

Some changes are subtle and appear deliberate but are not always obvious to the average construction professional.

Additionally, the Approved Code of Conduct (L144) which accompanied CDM2007 was withdrawn and the HSE have only published Guidance for CDM2017 (L153). To complement this change in emphasis the publication of industry guidance was encouraged and expected. The HSE strongly supported the production of the "Industry Guidance" commissioned by CONIAC and published by CITB.

Design Risk Management

How designers manage hazards and risk has been one of the main drivers at the heart of the CDM Regulations since their inception and much has been written about it, but are we any nearer having a consensus on what we are trying to achieve?

The specific reference in Regulation 11 to “The general principles of prevention” and reproducing them in full in Appendix 1 of the guidance on the 2015 Regulations would indicate that there is a need for to get back to basics and this cross reference to the Management of Health and Safety at Work Regulations 1999 is a timely reminder. Including the Principles of Prevention makes them more readily available, however they are not as helpful as they might have been, are generic, all-encompassing (for example, they were written to include factories with repetitive processes under controlled conditions) and they do not easily translate to the activities of the construction designer.

In CDM 2007 Regulation 11 stated, “*eliminate hazards which may give rise to risks*” and “*reduce risks from any remaining hazards*”. In CDM 2015 Regulation 9 states, “...*eliminate, so far as is reasonably practicable, foreseeable risks...*” One hazard can and often does give rise to many risks. It is therefore surprising that the 2015 Regulations significantly downplay the word ‘Hazards’, which appears to be a retrograde step that conflicts with previous guidance, many publications, training courses, company policies and the like since the publication of the 2007 Regulations.

It is observed that in all the non-domestic projects reviewed by the author design risk management was considered and managed to varying degrees of effectiveness. The variety of methods used was not unexpected and tended to be dictated by the design organisation’s own approach, as described in their quality management system. Documentation of the risk management process was found to be wanting in some cases, with insignificant risks included unnecessarily. This is worrying, after 24 years of this legislation, and possibly indicates a deep-seated problem with designers’ understanding of the required process combined with a lack of confidence in risk management decision making.

‘Designer’s Risk Assessments’ have been a mainstay of the design fraternity and are still commonly used. Some come complete with multiplication systems through which one can supposedly quantify risk levels; although allocating scores to the various boxes on these schemes is open to interpretation and it might even be argued that the scores at the end often suit the required outcome.

The HSE had previously promoted Hazard Elimination as an alternative to the often-generic Design Risk Assessment; this was adopted by some designers and a high proportion of CDM Coordinators prior to CDM2015. There are combinations of these that have tended to produce tabular formats or spreadsheet that track design hazards and risks as they are identified. These hazards and risks are then either closed out during the design process or if still not fully resolved they are communicated to the other designers and tenderers in the Pre-Construction Information.f

The communication of these risks and hazards has generally been by inclusion in the Preconstruction Information usually via the CDM Coordinator or now the Principal Designer. Many Principal Designers actively coordinate the individual design input into a coordinated document. Since the introduction of CDM2015 there has been a push in some quarters to replace spreadsheets and tables with marking hazards on drawings; these are usually hand annotated coloured notes. Alternatively, there is a combination of tabular and notes on

drawings. Again, though there does seem to be an inconsistency with some referring to hazards rather than residual risks. It is seen as essential by many designers that records are kept that demonstrates that a risk reduction process has been undertaken. This is brought on by a combination of pressure from their Professional Indemnity insurers and fear of prosecution by the HSE, which is often encouraged by equally fearful clients. It also runs contrary to the HSE desire to promote proportionality and relevance of information and records.

Notwithstanding the above the design side of the industry still hasn't been provided with a methodology for elimination and or reduction in risk which is able to answer the questions⁴. The new ICE Design Risk Management (DRM) guide, discussed below, is the first such document to tackle these issues and provide answers.

Communication

There has been much criticism of these systems for recording hazards that any competent contractor would be aware of and know how to control. Working at height when building a bridge, for example or the pointing out the adverse health effects of wet concrete are examples of 'stating the obvious' and would be information that a competent contractor does not need to have highlighted.

Risks communicated should be limited to significant risks as defined in the CDM2015 Guidance; *"...not necessarily those that involve the greatest risk but those (including health risks) that are not likely to be obvious, are unusual or likely to be difficult to manage efficiently."*

In addition, it is the significant residual risk that needs to be communicated not the hazard. The fact that this is still an issue is another worrying feature of these Regulations after such a lengthy time in operation.

ICE Design Risk Management (DRM) Guide

It was against this backdrop of uncertainty and confusion that ICE produced its Design Risk Management Guidance⁵. It is the first guide:

- produced with answers to the 'three questions' defined by the guide;
- to mention managers' roles;
- to mention the integrated nature of risk;
- to recognise the effect of contract on CDM;
- to introduce a framework for considering projects;
- to introduce 3 Principles for DRM and the standard work task; and
- to explicitly mention 'soft hazards' e.g. design risk.

⁴ The 2018 ICE report, "[In Plain Sight: assuring the whole-life safety of infrastructure](#)" proposes that the Swiss Cheese model of lines of defence is promulgated to ICE members and the wider civil engineering community.

⁵ Design Risk Management (2018). Institution of Civil Engineers

Domestic Clients

Introduction

The HSE define a domestic client as “anyone who has construction work carried out for them that is not done in connection with a business” and then clarify - usually work done on their own home or the home of a family member. It also appears to be capturing the bottom end of the SME market, which historically would have minor construction works carried out in a similar way to domestic projects.

It is recognised that most domestic clients will have little or no skills, knowledge or experience of managing a construction project. CDM2015 envisages that the domestic client will rely on the professionals brought in to carry out the works. Consequently, CDM2015 passes the duties of a domestic client onto other duty holders; normally it will be the architect, engineer or (Principal) contractor, who in many instances will be an SME.

If there is no formal agreement stating otherwise, the CDM duties fall upon the Main Contractor, who by default will become the Principal Contractor (Where there is more than one contractor), and on any designer in charge of pre-construction.

Mixed Messages

Whilst one of the prime drivers for the revised Regulations was the need to capture the domestic market, which indeed it does, it is noticeable that the increasing of the threshold for notification of projects will mean that a significant number of domestic projects will continue to be non-notifiable.

How is it working?

Even though Regulation 7 is clear and the CDM Regulations apply on all works; the knowledge of the Regulations amongst the domestic market is at best patchy and in the main applied infrequently.

At the high end of the market, for example, high-profile clients' houses, city centre basement extensions and the likes compliance are good. In the author's own experience even prior to the 2015 Regulations many large domestic schemes were already carried out in accordance with the CDM Regulations, as the contractors saw it as good practice. However, at the lower end of the market it is much less so. The small builders the author has spoken to demonstrated having little or no knowledge of the CDM2015 requirements and they are the ones who are predominantly delivering domestic projects. The domestic client is often having building works carried out for the first time and in most cases unaware of any construction regulations. This can be compounded by the black-market economy of working 'off the books' where simple designs are carried out outside of a formal contract. While these designs may often be competently done, they are carried out 'under the radar', ignoring the CDM Regulations.

There are also many small design firms that only do domestic designs and these firms, whilst aware of the Regulations, often appear to 'pay lip service' to them and off-load the CDM responsibilities to the contractor at the first opportunity. Whether the contractor will or will not accept these responsibilities depends partially on their competence but also significantly on their awareness.

RIBA has recognised many of these issues and is putting together coherent guidelines for its members to follow. Primarily these are contained in the RIBA CDM Appointment Guide, stating for example:

“As taking on the principal designer’s duties is essential for almost every domestic project, the RIBA recommends that its members:

- *develop the confidence and knowledge to use existing skills and experience to undertake the principal designer role; the RIBA and other organisations offer principal designer training courses for this purpose.*
- *discuss with domestic clients the principal designer duties as a mandatory part of the service at the same time as agreeing the scope of architectural services, and include the additional fee for the principal designer role in any fee negotiation for the overall appointment; and*
- *have a written agreement to undertake the role of principal designer as part of the scope of architectural services.*

If the PD role [automatically](#) falls to the Architect (RIBA Member) and the domestic client is unwilling to pay for this role then, under the RIBA Code of Conduct item 2.2, they should not accept work that they assess is not achievable for the fee:

Members should realistically appraise their ability to undertake and achieve any proposed work. They should also make their clients aware of the likelihood of achieving the client’s requirements and aspirations. If members feel they are unable to comply with this, they should not quote for, or accept, the work.

Clearly it is not the intention of CDM 2015 to cause difficult financial discussions to be had but, as explained in bullet 2 above, this issue might be best managed by discussing the PD role with domestic clients as integral to the architectural services and not a separate optional appointment (unless of course the domestic client wishes to appoint a separate PD).”

The new RIBA [Domestic Professional Services Agreement](#)⁶ includes the PD role as a core role to be included in the appointment.

The ICE’s [Professional Code of Conduct](#) could also be said to recognise the unregulated economy in requiring that...

“All members shall discharge their professional duties with integrity and shall behave with integrity in relation to all conduct bearing upon the standing, reputation and dignity of the Institution and of the profession of civil engineering⁷”.

It is however, recommended that the ICE produce guidance similar to those of RIBA for its members who may find themselves as lead designer on domestic projects.

The current failings to adhere to the CDM Regulations on the design side can be largely eradicated by the various Professional Institutions issuing mandatory guidelines. In the small contractor realm, it is much harder to educate the disparate group that carry out work for domestic clients. Enforcement would seem heavy handed

⁶ [Domestic Professional Services Agreement \(2018\). RIBA](#)

⁷ [ICE Code of Professional Conduct \(web accessed 2019\). Institution of Civil Engineers](#)

(and difficult for the under resourced HSE) but reaching and educating this group is deemed to be equally as difficult.

Information for Small Contractors

The HSE have issued CIS80, a two-page pamphlet on the [Construction Phase Plan](#)⁸ for the 'busy builder'. The CITB have a 3-page pro-forma on their website, GA26 Construction Phase Plan. Additionally, they have developed a smart phone app which assists in the creation of a plan. Where users have become aware of the CITB App it has been well received. Although it has been criticised in some quarters for being too "dumbed down" and can be said to make matters worse as people believe they are complying but are doing so thoughtlessly.

At the bottom end of the market, in an admittedly small sample, none were aware of documents that would assist them in complying with CDM2015. The majority were not aware of CDM, and the duties it places on them.

There is a real need for education of this group, whether through the trade associations (although many are not members of trade associations) or maybe a leaflet with tax returns or leaflets readily available at builder's merchants. Even leaflets at the place where many local builders meet to discuss and plan business, even the local pubs. It is not easy getting the message across although efforts are being made to promote the benefits and progress is happening.

⁸ [Construction Phase Plan \(2015\) Health & Safety Executive](#)

Competence and Training

General

The definitions of competence vary from the simple “The ability to do something well” to the slightly more nuanced, “The demonstrable characteristics that enable performance of a job, for properly doing the job, the individual requires skills and knowledge essential for the set duties.” Most people recognise what competence is but measuring it is not a simple process and assistance in assessing competence is always welcome.

Competence was formally introduced in the 2007 CDM Regulations with the explicit requirements to appoint competent people and organisations. The requirements of the 2007 Regulations were perceived as prescriptive even giving examples of the type of qualifications that would be recognised as competent under the Regulations. Appendix 4 of the CDM2007 Approved Code of Practice was dedicated to competence requirements for organisations; contractors, CDM co-ordinators and designers. Although this did spawn an excessive bureaucracy which in many cases failed to relate competence to project specific needs it was widely recognised to be a useful part of the Regulation and ancillary guidance. And while giving greater opportunity for more appropriate application, concern has been expressed that with its removal clarity has been lost in an industry which appreciates defined standards.

Appendix 5 of the 2007 Regulations gave guidance on assessing the competence on CDM Co-ordinators for larger and complex schemes; it was thought that Appendix 5 set competency standards high and this was generally welcomed by most of the industry and in particular by the learned institutions. Construction is an industry very much based on experience and one that is required to meet standards. When practitioners are asked to make judgement calls on matters without some parameters it will often be met by confusion and reluctance to commit.

One downside of the inclusion of specifics in the CDM2007 ACoP was that compliance with Appendices 4 and 5 did develop into a ‘cottage industry’ of competence assessments for designers and contractors without too much thought being given to what was trying to be achieved. However, in an attempt to combat this, [Safety Schemes in Procurement \(SSiP\)](#)⁹, founded in 2009, was being promoted by industry to eliminate duplication with limited success. Its aims were to streamline prequalification and encourage straightforward mutual recognition between Member Schemes. The HSE appears to be supportive of SSiP (of which the likes of CHAS and Construction Line are members) although the competence requirements were seen as a barrier to business; particularly for expanding SMEs who struggle to get approved, largely due to the demanded evidence which proved laborious.

CDM2015 and associated guidance are much less specific on competence, referencing instead Skills, Knowledge and Experience (SKE) and it could be argued that (despite referencing PAS 91¹⁰) they have been significantly reduced. The new Regulations appear to assume that the current duty holders are already sufficiently competent to carry out the health and safety roles required of them.

According to the SSiP website there are currently in excess of 57,000 suppliers registered with an SSiP Member Scheme and this information is readily accessible via the SSiP web portal. The SSiP web portal is free to access

⁹ [Safety Schemes in Procurement \(SSiP\) \(web accessed 2019\)](#)

¹⁰ PAS 91:2013+A1:2017: Construction prequalification questionnaires

and provides an easy way of finding out if a supplier holds valid certification with an SSIP Member Scheme and confirms compliance with the SSIP Core Criteria and UK Health and Safety Legislation.

It is also noted that there are still a great number of desk-top document based general assessments being undertaken and currently neither the 2015 Regulations nor SSIP appear to have had the desired effect, in particular, the need for appropriate project-based assessments.

Under the 2007 Regulations practitioners were expected to be chartered in a built environment profession with additional Health and Safety qualifications such as NEBOSH Construction Certificate. The ICE's Health and Safety Register and Membership of the Association of Project Safety (APS) were specifically mentioned. In simple terms it was thought that the CDM Coordinator role on large and complex projects would be carried out by a trained and experienced construction-qualified health and safety professional and this was supported by the Approved Code of Practice. This was often mistakenly thought to be an individual.

The 2015 Guidance on the Regulations (L153), does not mention 'competence' but refers to skills, knowledge and experience. The majority of practitioners and duty holders interviewed thought this to be a retrograde step. Although this mirrors the Management of Health and Safety at Work Regulations 1999, it is not felt to provide the required clarity.

Training

When any significant Health and Safety legislation undergoes change the construction industry proactively reacts with a wide range of training courses both external and internal. The cost of these courses is not insignificant and can eat up a high proportion of a company's training budget.

Clients

There has been additional client training as a direct result of the increased duties and responsibilities placed on them by the 2015 Regulations. There has been much in-house training targeted at the Client duties, although ICE training confirmed that much has been outsourced indicating the additional training required.

Principal Designers (PD) and Designers

In discussions with duty-holders it has been said that the CDM Coordinators were seen as experts with membership of safety related institutions almost a pre-requisite; whereas the PD is seen as primarily a designer with some health and safety knowledge but certainly not an expert in the safety field. The PD role is a significant change from the previous arrangements, and one would expect the training take up to be significant. Indeed, there does seem to have been a reaction to the need for engineers and other lead designers being asked to take on the Principal Designer role. Anecdotal evidence shows an increase in CDM training for architects and engineers, although most training is one or two days concentrating primarily on risk reduction.

Training providers have devised courses to suit designers' needs (and budgets) and these tend to concentrate on techniques to demonstrate compliance. Demonstrating compliance includes how to record hazards and show that reduction has been carried out or considered and techniques of identifying hazards and risks such as the General Principles of Prevention (Appendix 1 of the Guidance on the Regulations).

There has also been, admittedly from a low base, an increase in applications and membership of the ICE's Health and Safety Register since the introduction of the 2015 Regulations. The numbers in the APS have also

increased. This would indicate that some professionals and the Professional Institutions are recognising that a safety qualification is an asset.

Principal Contractors (PC) and Contractors

The 2015 Regulations have brought about very little change for the PCs and contractors and consequently apart from refresher training on the 2015 Regulations, to ensure that their staff are familiar with the changes to other roles, there appears to have been little need for additional changes.

Competent contractors have long had suitable training for their managers in not just the CDM Regulations but in health and safety legislation as a whole. CDM2015 has had little or no impact on this training although all contractors interviewed have had refresher CDM training since the changes.

Assessment of competence

The emphasis on the appointment of competent companies and competent people in CDM2007 led to a plethora of assessment methods usually involving much paperwork. A minor industry built up with Clients asking the CDM-C to assess designer's competence and then assessing the tenderers Principal Contractor's competence.

CDM2015 states "...*must take reasonable steps to satisfy that those who will carry out the work have the skills, knowledge and experience...*" At first sight this is a reduction in the requirements, but it has not led to a noticeable reduction in assessment questionnaires. Designers and contractors both report no reduction in pre-qualification questionnaires and some anecdotally felt there had been an increase.

The author is still regularly asked to score submissions in an attempt to evaluate contractor's tender submissions. Usually an elaborate system aiming to give weight to safety, environment and other key indicators to ensure that the tender award is not just based on price. Similarly, when bidding for new work, at the pre-qualification stage these questionnaires are still prevalent and often detailed.

There is still a long way to go to achieve one of the stated aims of the revision to the Regulations; a reduction in bureaucracy.

Competence v skills, knowledge and experience

It can be argued that we are talking about the same thing, after all how do you properly measure competence other than making a judgement of an individual or company's skills, knowledge and experience?

The comments received in this area have been mixed to say the least; many welcome the change expressing a relief that the tight reins imposed by the way the 2007 Regulations were being interpreted have been relaxed. Conversely, equally many rued the fact that skilled construction safety professionals will no longer be required, i.e. membership of the ICE Health and Safety Register or the APS or similar is not seen to be a requirement to carry out the PD role.



Documentation

This is a brief look at the various documents required by the Regulations and how they are affected and are being implemented.

F10

The changes brought about by the new Regulations are twofold: -

- An increase in the threshold for notification, resulting in fewer projects needing to be notified.
- The duty for notification now falls on the Client.

Evidence indicates that a significant number of Clients devolve this duty, by either adding it to the Principal Designer duties to fulfil the notification requirement or the appointment of a Client CDM 'advisor' whose duties will include the submission of the F10. These arrangements are not always reflected in contractual agreements. It is also clear that the client cannot relieve themselves of their statutory duties even when contracted to somebody else.

Provision of Information

Regulation 8 is clear, "Any person who is required by these Regulations to provide information or instructions must ensure the information or instruction is comprehensible and provided as soon as practicable." Or as has become familiar, "Getting the right information to the right people at the right time".

The 2007 Regulations introduced the Pre-Construction Information with detailed guidelines on what might be relevant given in Appendix 2. The Guidance on the 2015 Regulations include in paragraph 70 states: -

"The amount of detail provided should be proportionate to the scale and complexity of the project, the risks and the nature and purpose of the messages. Only information that is necessary to help prevent harm should be provided – unnecessary information can prevent the clear communication of key messages. Examples of types of information include the:

- a) pre-construction information the client is required to provide to designers and contractors;*
- b) health and safety information about the design that designers are required to provide to other duty holders;*
- c) information the principal designer must provide to enable preparation of the construction phase plan;*
- d) site rules that are part of the construction phase plan; and*
- e) information that principal contractors must provide to workers (or workers' representatives).*

Followed by in paragraph 71; Information or instructions must be provided in good time – before the work begins, so that the recipients can understand and take account of it in carrying out their duties. Wherever possible, it should be made available directly to the people carrying out the work. Where this is not possible, duty holders and workers need to know what information is available and where it can be found."

It appears that the information currently being provided predominantly remains in the format of the Information, as referred to in the 2007 Regulations, or very similar documents being provided by the design team and coordinated by the Principal Designer.

“Comprehensible”

This is an additional word that has appeared in the 2015 Regulations, related to the provision of information and while its full implications are not yet understood it is an indication that the 2015 regulations expect that all of the information being provided to be clear, logical and intelligible.

Proportionality and relevance

In Appendix 2 of the CDM2015 guidance the type of information to be included as: -

- a) *“Be relevant to the particular project*
- b) *Have an appropriate level of detail*
- c) *Be proportionate to the risks involved”*

This is a welcomed aim that could significantly reduce paperwork by concentrating on key areas of the hazards on a project. However, duty holders, when discussing this Appendix, had reservations about it because of their experience of visits from and discussions with the HSE following accidents. Once again, the common theme was that because of the reverse burden of proof the HSE insisted on evidence to defend the company’s procedures and fight off a prosecution.

Additionally, contractor’s insurance companies also require evidence of compliance. Consequently, information collated in the form of design risk assessments, method statements, task training records, etc. was essential evidence in the unlikely event of a serious accident that led to an HSE investigation or insurance claim.

A few designer prosecutions may focus the mind but beyond the Oxford Architects’ case and a brick archway collapse prosecution is few and far between.

Health and Safety File

Created with the 1994 CDM Regulations the Health and Safety File is the place where all information relating to the significant residual risks of a structure or building is placed and kept. Ready for retrieval when maintenance is due, faults occur, extensions or even demolition are planned.

The HSE CDM2015 Guidance states that, *“...its purpose is to ensure that, at the end of the project, the client has information that anyone carrying out subsequent construction work on the building will need to know about in order to be able to plan and carry out the work safely and without risk to health.”*

A problem with it is that it has always been competing with the long-established O&M Manuals that pre-CDM were traditionally handed over to the client on project completion. The O&M Manual still exists and that leaves a problem, what is the purpose of the Health and Safety File? How does it differ from the O&M Manual? Add the likes of Building Manuals into the mix and there is still, after almost 25-years confusion as to what goes where and why. In general, the Health and Safety File is combined with the O&M Manual, often as the first section. The Health and Safety File section will often include cross-referencing to subcontractor information contained elsewhere in the manual; e.g. demolition of the structure may refer to the steelwork subcontractor’s

section. The rest of the manual will be made up of as-built drawings, subcontractor information and the like. The most important section was thought to be the 'residual risks' and in many cases, this was addressed with a bland statement along the lines of "There have been no unusual or significant residual risks identified."

It was generally thought that the requirement should be for the O&M Manual to include easily found Health and Safety information.

An issue with the requirements for the Health and Safety File is the sentence in bold in Appendix 4 of the Guidance, "***The file is only required for projects involving more than one contractor.***" It was found that some clients, for example Water Companies, have numerous schemes that involve only one contractor. Some of these schemes can be quite substantial, often as part of term contracts, but normally consisting of repetitive works such as lengthy water main renewals. The Client, in such cases, overcomes this by writing additional contract clauses requiring the provision of a Health and Safety File / O&M Manual.

Storage and retrieval of these documents is also an issue, many designers, clients and contractors found that existing building information was either missing, incomplete or had not been maintained or updated. Storage of manuals is certainly moving away from an all paper situation to most clients requesting one paper copy together with several electronic copies. It should be noted that not all contract specifications have caught up with this change, often still requesting 3 hard copies.

Many large clients with multiple properties or sites that they control have invested in on-line document control systems which can store all information, electronically enabling access from all parts of the company. These can be updated as changes occur and make document control simple as only the current version of the data is readily available.

Increasingly, especially on large projects, the compilation of the handover documentation is handed to document control / compilation companies who will collate the manual on behalf of the Principal Contractor. It is common for the Principal Contractor to then offer, for an annual fee, to maintain the on-line documents for the Client's use. This offer is rarely accepted as the Client's plan in many cases is to sell on the building in the near future and they see no benefit in an on-line resource. This is unfortunate as it would simplify retrieval.

A key issue with the File is that unless subsequent users have confidence that it accurately represents the structure, including updating following maintenance or repair work after initial completion and handover, it will result in new surveys and testing.

Terminology

This is a section that was not planned but in talking to practitioners it was brought up on too many occasions to ignore. Since their inception the CDM Regulations have introduced new terms and phrases, some, like Planning Supervisor and CDM-Coordinator, have since just as quickly vanished from our lexicon. Others like the Construction Phase [Health and Safety] Plan, Health and Safety File and Principal Contractor appear to be here to stay.

The introduction of new phrases, roles and documents has meant that the Regulations have diverged from standard industry terminology and meant that contract documents can until changed be at odds with the Regulations. Whilst interviewing people the author found that there was a common perception that the CDM related names were not helpful and to some people they were confusing.

The term Lead Designer has long been used to indicate the design practice that heads up, manages and co-ordinates the design input from other designers. So, it may be that an architectural practice or structural engineer will for an additional fee also be appointed as Lead Designer. They will then be expected to head up the design team and ensure that the various design team elements are all heading in the correct direction and co-ordinating with each other.

Then CDM2015 introduces the Principal Designer, in many cases it will be the same design practice, although in practice this is far from consistent. It was also pointed out that in some practices the Principal Designer (an individual) had previously been the person who reviewed or audited the design, maybe even checking calculations. There were even tales of people refusing to be Principal Designer because they didn't want to be responsible for the calculations. Anecdotally there were stories of some engineering practices having struggled to get professional indemnity insurance cover to act as the Principal Designer; one wonders if parts of the insurance industry are also failing to understand the terminology of CDM2015.

The changes to the co-ordinator; first the Planning Supervisor, then the CDM-Coordinator and now apparently morphed into the Principal Designer have added to the general scepticism of the role.

It is similar with the Principal Contractor; the construction industry historically had referred to this role as the Main Contractor or Managing Contractor. It is in most cases exactly the same role, so why the name change¹¹? The continued use of the term Contractors (a contractual description) to mean what 99% of the industry have always called Subcontractors or Trade Contractors is equally unhelpful, with the Regulations using the term to refer to all contractors engaged in the construction phase, and being blind to other contractors, for example designers.

Although the Construction Phase Health and Safety Plan (Now called the Construction Phase Plan) was a new concept to many, the idea was not new. Many projects used a Project Execution Plan or similar to outline how the contract would be run, these often started in the design stage and were developed through into the construction phase. The Project Execution Plan covered a lot more than the health and safety issues on the site but once again CDM had introduced what was felt to be unnecessary new terminology.

¹¹ Although it must be noted that the labels for contractors have been in place since the original iteration of the CDM Regulations in 1994.

Finally, we have the Health and Safety File. Introduced with the 1994 Regulations to an industry that was familiar with the Operation and Maintenance Manual, so once again a new name was introduced to the construction industry. This phrase appears to have caused more confusion than the rest, with some in the industry still unsure if this has to be a stand-alone document. This is despite guidance in the 2007 ACoP and an appendix in the 2015 Guidance some people were unsure what to include or more precisely what went in the Health and Safety File and what went in the Operation and Maintenance Manual.

The confusion appears to have arisen because items listed to be inserted in the Health and Safety File, such as as-built drawings, structural principles and the like were historically included in the O&M Manuals. A common approach appears to be to have a section (often section 1) of the Operation and Maintenance Manual called the Health and Safety File. To avoid duplication this will often cross-reference to other sections of the documentation and satisfies both requirements and simplified the documentation.

How are the 2015 Regulations working?

It is now almost 25-years since the CDM Regulations first appeared and over 3-years since the introduction of the 2015 Regulations. It should be clearly stated that the Regulations still appear to be working in spite of, rather than because, of the changes. This is thought to be predominantly down to the fact that CDM and the need for good Health and Safety planning and management has become embedded in the industry's culture and that change is an annoyance that has accepted, albeit in some cases, reluctantly.

It has largely been agreed that when CDM 1994 appeared it was the designers and consultants that had the most to learn. Competent main contractors and sub-contractors had been producing method statements, risk assessments and generally accepting responsibility for safety on site for some years previously.

It is the design team that has had to undergo the most radical changes to their cultures, to begin to understand their influence on the safety, health and wellbeing of projects during construction, use, maintenance and demolition / decommissioning. There has been a marked improvement but there are still many questions to be answered and too much of design safety appears to be by rote.

Production of generic Design Risk Assessments with simple 'scoring systems' are too often seen as the method of choice. The HSE had previously indicated that hazard elimination was the preferred method, although the lack of reference to the word 'hazard' in the Regulations puts this in doubt. It was apparent to the author that fear of prosecution is the key factor in this. The Health and Safety at Work Act's reverse burden of proof greatly concerns senior directors. Despite the HSE's constant call for less paperwork, as soon as anything significant goes wrong on site the investigation relies heavily and insists on paperwork.

The generic Design Risk Assessments or similar are erroneously seen as a simple way of demonstrating that all health and safety issues have been considered. More complex versions of these tabular systems are being used as trackers throughout the design stages to monitor how hazards and risks have been recognised and then addressed. There is evidence of evolving methods of hazard identification beginning to emerge, methods by which general arrangement type drawings are marked up with safety comments and warnings for contractors. BIM, whenever it is implemented on a project is giving designers opportunities to add safety information to drawings.

Cost versus architecture versus safety is a discussion that causes much debate and conflict. The pressures come from the client to deliver on cost versus the architect on design intent versus the safety requirements for buildability, usability and maintenance. Add into this mix 'Safe by Design', BREEAM and planning issues and it is easy to understand why compromise can lead to poor designs and the design will often be a 'so far as is reasonably practicable' solution.

The Client

Clients appear to have accepted the changes although their approach to compliance does vary greatly. Most clients are devolving the issuing the F10 and other duties to the Principal Designer or a Client CDM advisor. Additionally, many clients value the independence that the Planning Supervisor and CDM Coordinator gave. Consequently, instead of appointing their Lead Designer as Principal Designer they are appointing stand-alone Principal Designers, frequently individuals, and these are usually the same sort of person that carried out the

CDM Coordinator role. This may be partially driven by the requirement in the Management of Health and Safety at Work Regulations 1999 to obtain “competent assistance”.

Principal Designer (PD)

This is the most significant change brought about by the 2015 Regulations with the removal of the independent CDM Coordinator function and the introduction of the ‘seemingly similar’ yet different Principal Designer role. The purpose was to bring this safety critical role into the design team rather than for it be a stand-alone appointment. It was envisaged that the Lead Designer will normally take on this responsibility be that the architect or an engineer but as has been discussed that is currently not always happening.

It should be remembered that the Principal Designer is not necessarily the appointment of an individual; it can be either an organisation or an individual that has been appointed. The larger design organisations have tended to encompass the role willingly, as often these companies already had in-house construction health and safety design risk management expertise who could be consulted about non-standard design issues. Thus, when taking on the role of Principal Designer it could be argued that the actual mechanics of the role is being carried out by personnel external to the design team anyway.

An additional fee for carrying out the Principal Designer role is certainly needed by any designer accepting the role. One architect said, “This is a considerable additional budget to deliver the PD role, and more than washes its face, by adding value to projects.” In most cases an increase of the fee has been agreed with the Client, but examples of fees being nominal or non-existent were also noted.

The HSE expected an evolution of the PD role from CDM-Cs to Lead Designers as detailed in Table 1 below: -

Level	Stage	Time scale	Who does what
Level 1	Unaware	Pre-Oct '15	H&S delegated to CDM-C
Level 2	Compliance	Next 2-years	Use of 'non-active designers (ex CDMCs as PD
Level 3	Proactive	1-5 years	Active designers undertaking PD role with ex CDMC support
Level 4	Natural	5+ years	Lead Designer automatically PD: no support

Table 1: PD role - what has been the impact so far¹²

To some extent the appointment of the Lead Designer as Principal Designer has happened but there is still a significant market for a ‘stand-alone’ or independent Principal Designers. There appear to be two drivers for this, firstly Clients who liked the independence of CDM Coordinator role and wished for a similar role within the new Regulations and therefore continued to make separate appointments for the Lead Designer and the Principal Designer.,

The second driver, particularly prevalent amongst the smaller design companies, is the external appointment of a Principal Designer to act on their behalf, they recognise that they are only buying support and not devolving

¹² CDM2015 Update – Nearly 2 years old (2017) Coppin, S. Institution of Occupational Safety & Health

their duties. The usual reason given is 'competence' or resources, the design companies are not confident that they have a sufficient level of in-house capability in health and safety co-ordination matters.

Designers

There has been little impact on the Designer role with the new Regulations beyond design practices updating their procedures to reflect the changes. Consequently, the changes have generally been easily absorbed by these duty holders and are not further discussed in this paper.

Principal Contractor and Contractors

There has been little impact on the Principal Contractors and Contractors role with the new Regulations. It was found that throughout the contracting industry there had been a comprehensive programme of update CDM training tailored to the company's needs.

There does seem to be an increase in Principal Contractors taking on the PD role once the construction phase commences, this is most prevalent on design and build type contracts where there is a logical opportunity for the party with the most influence and authority to lead and take responsibility.

Consequently, the changes have generally appeared to have been easily absorbed by these duty holders and are not further discussed in this paper. However, it could be argued that the relevance of the word 'comprehensible' in CDM2015 has not been fully appreciated by the contracting fraternity.

Client CDM Advisor

The Client CDM advisor is the name given to a role that has evolved since the 2015 Regulations were published. There has been a noticeable trend in the appointment of a Client CDM Advisor; thought to be driven primarily by clients wanting Health and Safety advice independent of a PD appointed as part of the Lead Designer's role. Additionally, some of the additional Client duties (e.g. Submission of the F10) are also being delivered by the Client CDM Advisor. The role appears to be evolving and there are elements of 'compliance' being added to the role with the Client CDM Advisor monitoring the design team to ensure that the CDM duties are undertaken in accordance with the Regulations.

Although not covered by CDM2015, independent and regular health and safety inspections as the construction progresses are also being requested with many Client CDM Advisor appointments.

Domestic

Said to be the primary reason for amending the Regulations it does appear to be being fairly consistently implemented at the high end of the market. The likes of basement extensions and new build high-profile client's houses appear to be fully compliant with the new Regulations. Principal contractors whose whole business is centred on similar 'high end' house building are finding that all their schemes were similarly compliant.

At the other end of the market, e.g. a small domestic kitchen extension, the compliance is reported to be poor or non-existent.

Reduction in Bureaucracy

Accompanying every iteration of the Regulations has been the mantra of reducing paperwork as one of the primary reasons for the revision but so far it does not seem to be particularly effective. The obstacle that a

designer must overcome is the fear of prosecution by the HSE, should something go badly wrong, as written evidence is thought to be essential and by far the best evidence to use to defend oneself. The reverse burden of proof in UK law essentially means it is for the duty holder to show that they have in fact discharged their risk management obligations, for example can you demonstrate that you took reasonable steps to ensure the safety of the building or structure that you are designing? The designers' fear is often reinforced by their insurer's understandable risk adverse policies.

Defining what is 'so far as is reasonably practicable has been addressed in another ICE paper that can be found on the ICE website.

Conclusion and Recommendations

The overwhelming response from industry was "Why change the Regulations again so soon?", but as always industry has embraced the Regulations and is trying to make them work. Going forward it was generally thought that an extended period of stability is needed. Consideration should be given to the following key recommendations from this research

1. The role of the Principal Designer in schemes for Domestic Clients is new and RIBA have issued guidance. It is recommended that ICE also issue guidance for the many members who carry out simple designs for domestic clients.
2. The importance of the Principal Designer role does have a cost, it is not a free add-on to the lead designer role. If accepting the PD role, the lead designer must understand, acknowledge and fulfill the further responsibilities which this additional position entails.
3. Design risk management is still not fully understood by many in the construction industry.
4. The confusion and dislike for the bespoke terminology brought about by CDM was apparent from many of the interviewees; although it is now too late to undo this.
5. The change from competence to skills, knowledge and experience has been accepted with suspicion in many quarters.

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Document reviewers

Name	Organisation (if any)
David Lambert	Independent consultant / trainer
Tony Putsman	Independent consultant / trainer
Philip Baker	Institution of Structural Engineers
Margaret Sackey	ICE past Chair of H&S Expert Panel
Ciaran McAleenan	ICE Chair of H&S Expert Panel