An Analysis of Health and Safety Provisions in the NEC Contracts.

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ABSTRACT

The 2015 edition of the CDM Regulations impose statutory duties on the project client and other project supply chain members. It is the client's statutory duty to make and implement arrangements for effective management of health and safety (H&S) on the project. They also created two statutory duty holders that the client must appoint to coordinate H&S management. To manage the performance of the duty holders effectively, the client must enter into a contract with each of them that imposes their statutory duties as contractual obligations. The paper critically analyses two representative contracts in the NEC family of contracts to provide guidance on their H&S provisions and pointers to possible review in future editions. An important finding is that the contracts state the H&S duties in very general terms with the expectation that users will draft the details on the CDM duties as part of the Scope contract document. This approach has the advantage of flexibility to accommodate international use of the contracts. It is recommended that the promoters consider the alternative of capturing appropriate CDM related duties as a standard optional clause for adoption by UK users. Suggestions are made as to the terms in such an optional clause.

Keywords

Contracts & Law, Health & Safety, Project Management

INTRODUCTION

The primary UK domestic legislation relevant to health and safety (H&S) at work is the Health and Safety at Work Act 1974 (HASAWA) which applies across industries. This Act sets out the framework of the law on H&S at work and provides mechanisms for enforcing compliance with it. Contravention of any H&S duties under the Act is a criminal offence under s. 33(1) (c) and, as such, liable to prosecution. S. 15 of the Act authorises the Secretary of State (a senior Minister of the Government) for the appropriate government department to make 'H&S Regulations' applicable to specific industries and H&S risks that become part of the Act. Many Regulations on specific aspects of H&S risks in the construction industry have been passed and carry effect as provided for under HASAWA.

Much of the UK H&S law emanated from membership of the European Union (EU). EU H&S law in the form of Directive 1992/57/EEC was first implemented as UK law on 31 March 1995 as the Construction (Design and Management) Regulations 1994 (CDM 1994). They placed specific statutory duties on the traditional project participants (clients, contractors and designers). They also created two new duty holders labelled "Planning Supervisor" and "Principal Contractor" for the coordination of H&S matters at the pre-construction and construction phases, respectively, of projects. As the industry grew in experience of the operation of CDM 1994 on construction sites, criticism of various aspects of the Regulations emerged. In response, CDM 1994 were replaced with the Construction (Design and Management) Regulations 2007 (CDM 2007). CDM 2007 were in turn replaced by the Construction (Design and Management)

Regulations 2015 (CDM 2015), which came into force on 6 April 2015. The changes made included relabelling of what was originally the Planning Supervisor as the Principal Designer.

The basis of statutory duty under the Regulations is the simple fact of being a CDM duty holder, which is sufficient to impose the relevant duty on the duty holder with accompanying criminal liability for non-compliance. They are of direct application in the sense that very little contractual formality is required for the application of the obligations under the Regulations to a duty holder. The only contractual requirement is that the Principal Designer (PD) and the Principal Contractor (PC) should be appointed in writing by the Client. However, for at least two main reasons, the CDM Client needs to pay particular attention to the content of the contracts by which it procures the services of the duty holders. The first reason stems from the Client's duty under Regulation 4(1) not only to make suitable arrangements for managing H&S on the project but also to ensure that the arrangements are maintained and reviewed throughout the duration of the project. Regulation 4(6) requires the Client to go further and take reasonable steps to ensure that the CDM duty holders comply with their duties. There is therefore the obvious implication that the management arrangements must be monitored to assess whether they are having the desired effect and to take appropriate remedial action. Whilst the Health and Safety Executive (HSE), the designated state authority, may prosecute any duty holder for breach of the Regulations, appropriate contracts with duty holders provide the Client with the only lever for enforcing their compliance with the Regulations. The Client must therefore not only establish a contractual relationship with each CDM duty holder in relation to its statutory duty but also ensure the

cascading of those contractual liabilities throughout the contractual chains linking the supply chain members.

The second reason concerns the Client's self-interest. Breach of duty by a duty holder would often result in the Client's criminal liability from which the Client stands to suffer not only direct financial loss in costs of legal advice and representation and fines (or even imprisonment in the case of human clients) but also reputational damage. Further, the CDM Client is open to wider risks of financial loss from personal injury, death of workpeople on the site or members of the general public, property damage and project delays and disruption caused by breach of duty under the Regulations. Regarding the risks of personal injury, death or property damage, it is for each victim or their personal representatives to determine whom to hold responsible for the harm suffered. The usual reaction of anybody injured or who suffers damage to its property is to sue whoever is perceived causally responsible, either in part or wholly, for the injury or damage. The most visible targets include the Client or any of the CDM duty holders prominently identified in signs and notices on the project. The main legal grounds on which liability may attach to the Client include negligence, nuisance, trespass, strict liability and liability under *Rylands v Fletcher* principle.

In deciding whom to sue for injury or loss, the strategy of the typical claimant is often that of the proverbial 'duck shoot' or the so-called 'scatter gun' approach, i.e. the victim sues everybody involved on the site (Ndekugri and Rycroft, 2009). The Client may therefore be sued for events flowing from a breach of the Regulations by any of the duty holders. Such suit may occasion financial loss to the Client even where it successfully defends the victim's claim. Self-interest mandates a contractual relationship through

which such loss can be passed on to the relevant duty breaker. Contracts therefore have risk clauses that seek to specify, as between the duty holder and the CDM Client, which contractual party will be responsible for which risk. Risk clauses are often accompanied with indemnity clauses stating that where one party suffers financial loss from a risk for which the other is responsible, the latter should indemnify the former.

A "contractor", which is defined to include not only main contractors but also sub-contractors, is required by Regulation 15(3) to comply with any direction of the PD and the PC. Such direction may not only create variations to the works but also cause delay and disruption to them. One of the challenges of such intervention by the PD or the PC is avoidance of disturbance to the governance system of contract management giving contract administrators sole authority for issuing instructions to the main contractor. There is therefore a need to address these issues in the main contract and contracts of engagement of duty holders. For example, should the main contractor be entitled to extension of time or financial compensation for delay and disuption caused by a direction from the PD or PC? If there is such entitlement, the liability should be passed to the duty holder who caused the delay or disruption through terms in the relevant contract of engagement.

A Client's strategy for compliance with its CDM duties must therefore include engaging the duty holders through contracts with appropriate content. Accordingly, drafting committees for the construction industry's standard form contracts revised them to take account of the original CDM Regulations and, thereafter, their revisions. A review of the extant literature, summarised in the paper, found very little on CDM related provisions in standard form contracts. This paper reports on research into provisions on

H&S generally and CDM 2015 in particular in two representative members of the NEC family of standard form contracts: the NEC4 Engineering and Construction Contract (NEC4 ECC) (NEC, 2017a) and the NEC4 Professional Services Contract (NEC, 2017d). It is intended primarily to provide guidance to users of the contracts on how H&S risks can be effectively addressed in their preparation of the documents required by the contract. It is also hoped that it will inform the producers of the contracts in future contract reviews. The paper is structured in nine parts as follows. Section 2 outlines the methods followed in carrying out the research on which the paper is based. The review of the relevant literature is summarised in Section 3. Section 4 identifies the duty holders under the Regulations and examines the nature of their duties. The Regulations require the preparation of certain documents in the management of H&S. Section 5 identifies these documents and examines their content requirements. The relevant contractual provisions in the NEC4 ECC and NEC4 PSC are analysed in Sections 6 and 7, respectively. Conclusions are drawn after a brief discussion in Section 8.

2 RESEARCH METHOD

The research on which the paper is based was carried out in two parts with some iteration between them. Firstly, the CDM 2015 Regulations were analysed using principles of statutory interpretation as described typically by Bailey and Norbury (2017) and Bell and Engle (1994). One of these principles, referred to as the "literal rule", is that a statutory provision is to be interpreted using the ordinary meaning of the words used in it except where the words or terms are defined in the statute or the literal meaning is absurd. For example, "designer" and "contractor" are defined under the

Regulations giving them meanings different from their ordinary usage and were treated accordingly. There are other rules of statutory interpretation for use where application of the literal rule is inappropriate but they were not found to be relevant here because of the opportunities taken to eliminate problems of interpretation in the successive revisions of the Regulations.

The standard form contracts were then scrutinised with the aim of identifying terms relevant to the Regulations and working out their meanings by the application of the principles governing the interpretation of contracts distilled from case law, such as *Investors Compensation Scheme Ltd v West Bromwich Building Society* [1998] 1 WLR 896; *Chartbrook Ltd v Persimmon Homes Ltd* [2009] UKHL 38; *Arnold v Britton* [2015] UKSC 36 and *Rainy Sky SA v Kookmin Bank* [2011] UKSC 50, and captured in textbooks such as Lewison (2015). Account was also taken of the further guidance provided by the Supreme Court in *Wood v Capita Insurance Services Ltd* [2017] UKSC 24 on the approach to contractual interpretation, particularly the interpretation of indemnity clauses, which are in the contracts in this paper.

3 SUMMARY OF LITERATURE REVIEW

The extant literature on the CDM regulations falls into broad two categories. The first category is a combination of: expert commentaries on the letter of the legislation; practitioner commentaries based on individual experience of the implementation of the Regulations into practice; and reports of surveys into industry views on their experience of the Regulations in practice. Most of these publications, which are summarised in Table A, were on the 1994 and 2007 editions of the Regulations and were aimed at

identifying shortcomings in the Regulations for improvement action by construction industry businesses or review of the Regulations by the HSE. The main shortcomings identified were:

- late appointments of duty holders by clients;
- duty holder general competence deficits;
- overly bureaucratic practices;
- generation of excessive and irrelevant paperwork to maximise protection in the event of prosecution; misunderstanding of the Regulations;
- ambiguities in the responsibilities of duty holders;
- lack of relevant training and supervision;
- misunderstanding of the CDM roles;
- inappropriate industry practice and norms; inadequate levels of prosecutions;
- lack of awareness of the Regulations;
- inadequate management of risk at the pre-construction stage; and
- inadequate leadership of compliance with the Regulations.

[Table A about here]

The second category of literature concerned analysis of provisions implementing the Regulations into contracts within project supply chains. Apart from overviews of CDM related provisions in the industry's standard form contracts in some textbooks (e.g., Ndekugri and Rycroft, 2009; Broome, 2012; Rowlinson, 2018; Eggleston, 2019), the review found very little in this category. The review uncovered only two publications based on the 2007 edition of the Regulations (Mzyece *et al*, 2012; Patterson *et al*, 2015) whilst the little research literature on aspects of CDM 2015 (e.g., Manu *et al.*, 2017;

Manu et al., 2019; Poghosyan et al, 2020; ICE, 2020) hardly considers contractual content, thus confirming the need for analysis of provisions implementing the Regulation into supply chain contracts.

4 DUTY HOLDERS AND THEIR DUTIES UNDER THE REGULATIONS

In relation to a construction project the Regulations specify certain statutory duty holders: a CDM Client, a Principal Designer; designers, a Principal Contractor, and contractors. Designers and contractors (including sub-contractors at all levels) must have the skills, knowledge, and experience (SKE) and, if an organissation, the organisational capability (OC) necessary for effective management of H&S (Regulation 8(1)). Any party responsible for appointing a designer or a contractor must take reasonable steps to satisfy themselves that the appointee possesses these attributes whilst a candidate for appointment must not accept it unless they meet these requiements. Detailed understanding of the roles and the related statutory duties can be developed by reading the Regulations in the light of published commentaries (Bussey, 2015; Joyce, 2015; Putsman and McArthur, 2015).

5 CDM DOCUMENTS

The Regulations mandate the preparation and sharing of certain information by specified duty holders. Regulation 9(4) puts on a designer, as defined in the Regulations, a duty take “all reasonable steps to provide, with the design, sufficient information about the design, construction or maintenance of the structure”. The information to be provided must adequately assist other duty holders to comply with

their duties under the Regulations. There is an express requirement to provide to the PD information on risks not eliminated by the design and other appropriate information for the Health and Safty File (HSF). There is no express duty to provide the information directly to other duty holders. Other documents to be prepared and shared are: pre-construction information (PCI); construction phase plan (CPP); and the health and safety file (HSF).

The PCI is information in the Client's possession or reasonably obtainable by or on behalf the Client concerning: the project; the planning and management of the project; and H&S hazards on the site or hazards associated with the design and construction of the project. Appendix 2 to the HSE guidance document on the Regulations (HSE, 2015) sets out the content requirements of the PCI and actions required of other duty holders in relation the preparation, review and use of the documents whilst Appendix 5 explains how it interacts with the other CDM documents on multi-contractor projects. The CPP is defined as "a plan drawn up under Regulation 12 or 15". Regulation 12(1) puts on the Principal Contractor on a multi-contractor project a duty to prepare the CPP during the pre-construction phase or to arrange for it to be prepared. On a single contractor site, this duty is on the contractor (Regulation 15(5)). The Client must ensure that the CPP is prepared before the construction phase begins (Regulation 4(5)). Its contents, as summarised in Regulation 12(2), include the H&S management arrangements and site rules governing the carrying out of construction work on the site. It must also include specific measures on particular risks listed in Schedule 3 to the Regulations, e.g, risk of burial by failure of excavations, power lines, and the installation or dismantling of heavy pre-fabricated structures. Regulation 12(5) puts on the PD the duty to prepare the HSF. It must include information relating to the project likely to be needed to ensure the

H&S of any person involved on any subsequent project, e.g, maintenance, extension, or demolition of the structure resulting from the prior project.

6 NEC4 ENGINEERING AND CONSTRUCTION CONTRACT

The study of this contract identified the following as its constituent contract documents: Form of Agreement; Contract Data; Scope; Site Information; Bill of Quantities/Activity Schedule; and conditions of contract (NEC, 2017b).

No standard Form of Agreement is provided as part of the book commonly referred to as the NEC4 ECC although a sample contract agreement is provided as part of the NEC4 User Guide (NEC, 2017c). The expectation of the sponsors of the contract on this subject appears to be that a bespoke contract agreement can be created by an exchange of letters between the Client and Contractor creating a contractual relationship on the basis of the Contract Data and the other contract documents incorporated by it. It would appear that the drafters of the NEC4 ECC took a view that parties are more likely to prefer using their own in-house standard contract agreements to using any specified standard form imposed as part of the contract. However, a sample contract agreement is provided as part of the NEC4 User Guide (NEC, 2017c).

The Contract Data, which is in two parts, sets out the information on the particular project without which the Conditions of Contract cannot be operated. Contract Data part one is compiled by the Client and issued to tenderers as part of the tender documents. Tenderers complete the Contract Data part two template and return it as part of their

tenders. Finally, it identifies (by document title or reference number) the other contract documents.

The Scope describes the works to be provided by the Contractor within specified constraints. The equivalent document under the predecessor of the NEC4 ECC was referred to as the "Works Information". The Scope usually comprises multiple disparate documents, e.g., drawings and a traditional specification. The expectation is that the identities of the documents forming part of the Scope are entered in appropriate parts of the Contract Data. Information in any Project Manager's instruction under the contract adding to or modifying the specification or description of the works or the constraints within which they are to be carried out becomes part of the Scope.

Site Information is defined by Clause 11.2(18) as "information which describes the Site and its surroundings". The identifiers of the documents in which this information is to be found are to be completed in the Contract Data part one. Types of information to be provided as part of Site Information include: information from subsoil investigations carried out; information on buildings and other structures on the Site; information on services at, on or adjacent to the Site; and reports of any special investigation commissioned by the Client such as asbestos surveys and hydrographic surveys.

The conditions of contract are the detailed terms governing the performance of the contract. A distinction of this contract is that, unlike all other standard form contracts, it does not provide a set of terms that apply to all projects which it is used to procure. Instead, it has a set of core clauses that apply to all projects on which it is used. There are then three levels of options: a choice of one from six main options according to the

payment approach adopted for the project; choice of any number from 25 secondary options (Options X1-X22; Options Y(UK) 1,2 and 3) to suit the user's procurement decisions and related statutory provisions; and a choice of one from three dispute resolution options. The conditions of contract make only three specific references to H&S: the Contractor's obligation under Clauses 20.1 and 27.4 to act in accordance with the H&S requirements stated in the Scope; the Contractor's duty under Clause 31.2 to show on each programme submitted "provisions for health and safety requirements"; and contract termination provisions in Clause 90.1 and 91.3. There are other provisions that can be operated to promote H&S generally and to ensure compliance with the Regulations although neither the CDM Regulations nor H&S generally is mentioned in them. They include: the requirement in Clause 10.2; the early warning procedures under Clause 15; risk allocation provisions in Clauses 81.1 and 82.1; and early contractor involvement under Option X22.

6.1 Obligations under Clauses 20.1 and 27.4

Clause 20.1 states the Contractor's primary obligation to provide the works in accordance with the Scope. As part of this general obligation, the Contractor is required by Clause 27.4 to act in accordance "the health and safety requirements stated in the Scope". Any important H&S requirement or constrain must therefore be clearly stated in the Scope. This provision links in with the definition of "Completion" under Clause 11.2(2) as "when the Contractor has done all the work which the Scope states is to be done by the Completion Date and corrected notified Defects which would have prevented the Client from using the works or Others from doing their work". If no specific conditions are stated in the Scope, the test of Completion is "when the

Contractor has done all the work necessary for the Client to use the works and for Others to do their work". This accords with the definition of "practical completion" in the common law, which is reviewed in *Mears Ltd v Costplan Services (South East) Ltd* [2019] EWCA Civ 502;[2019] BLR 289. As the Contractor has the highest possible motivation to have the works declared complete by the Project Manager when it believes it has carried out all the works to physical completion, there is a strong case for imposing specific H&S safety outcomes as pre-conditions for Completion. Examples include: providing all relevant H&S information to not only the Client but also other duty holders who may need such information for the completion of their H&S duties.

There is an independent statutory obligation to comply with all applicable legislation, including the CDM 2015 in the sense that, without this clause, the Contractor still has to comply with the legislation. The real effect of Clause 27.4, if the Scope expressly requires the Contractor's compliance with the Regulations, is to impose compliance with the Regulations as contractual obligations. Such contractual provision allows the Client to claim, as damages for breach of contract, its losses suffered as a consequence of the Contractor's breach of the Regulations. Depending on the content of the Scope, the Contractor may assume duties beyond the bare requirements of the Regulations. For example, it may specify the level and quality of the staff resources that the Contractor should provide and the powers of the Client and the Project Manager to intervene if the Contractor is failing in some aspects of its H&S duties. Unfortunately, there is no equivalent of Clause 27.4 creating a contractual obligation on the Client to comply with the Regulations. Contractual obligations on the Client spelling out how the statutory

duty is complied with provide a route through which the Contractor may recover damages consequent on the breach of the statutory duty.

6.2 Obligations under Clause 31.2

Clause 31.2 requires the Contractor to show on each programme submitted "provisions for health and safety requirements". Matters that can be shown on a programme are either operations or events. The Regulations themselves only identify the duties of the Contractor. This clause will have any practical effect only if specific activities (e.g., preparation of the CPP or HSF) or events (e.g., submission of updated CPPs) within these duties are identified in the Scope, which may also require the programme to include a schedule of H&S information to be submitted (NEC, 2017b, p. 64).

6.3 Termination under Clause 91.1 and 91.3

The third specific provision is in Clauses 90.1 and 91.3. Under the latter clause, the Project Manager may serve a notice of a default if the Contractor has "substantially broken a health and safety regulation". If, after the notice, the Contractor has not stopped the default within four weeks, the Client may terminate the Contractor's employment. To exercise the right to terminate, the Client must serve notice to the Project Manager under Clause 90.1 citing the failure to remedy the H&S breach as the reason for its intention to terminate the contract. The termination takes effect upon the Project Manager responding to the Client's notice with the issue of a termination certificate. There is no express corresponding right of the Contractor to terminate for the Client's breach of its H&S duties.

6.4 Clause 10.2

Cooperation and coordination within the project supply chain constitute a hub of the Regulations (for example, see Regulations 8(4),11(5), 13(2), and 13(5)) and echoes the supply chain integration ethos articulated in general project management literature (eg, Dainty and Millett, 2001; Briscoe and Dainty, 2005). The rationale behind the requirement for cooperation and coordination is the importance of promoting timely identification and communication of H&S risks for appropriate action, including ensuring that everybody who needs to know of the risk has access to the relevant information. It is part of the duties of the CDM Client, acting through the PD and the PC, to take reasonable steps to ensure that the management systems and procedures for the project adequately address the need for such cooperation and coordination.

A notable feature of the NEC family standard form contracts is that most of them impose a contractual duty to give effect to the drafting policy of encouraging cooperation throughout the project supply chain. For example, Clause 10.2 of the NEC4 ECC states that the Parties, the Project Manager and the Supervisor are to act in a "spirit of mutual trust and co-operation". To promote cooperation within the supply chain, Clause 26.3 provides that the Project Manager's rejection of the Contractor's proposal to appoint a sub-contractor would be valid if the reason for the rejection is that the sub-contract does not include a term equivalent to Clause 10.2.

6.5 Early Warning Procedures

At the pre-contract stage of an NEC4 ECC project both parties are to list in their respective sections of the Contract Data any early warning matter they are aware of at that stage. An early warning matter (EWM) is defined in Clause 15.1 as: “any matter which could: increase the total of the Prices; delay Completion; delay meeting a Key Date or impair the performance of the works in use”. It is to be noted that the definition is exhaustive; it covers matters which will affect Prices, progress or quality. H&S risk is not mentioned specifically although some matters within the definition may also be H&S risks. However, there is no contractual duty to notify H&S risks that will not impact on Prices, delays and quality although such risks are likely to be rare.

The Project Manager is required by Clause 15.2 to draw up the first Early Warning Register within a week of the “*starting date*”, which is the date entered in Contract Data part one. Clause 11.2(8) defines “Early Warning Register” (EWR) as “a register of matters which are: listed in the Contract Data for inclusion and notified by the Project Manager or the Contractor as early warning matters”. Clause 15.1 puts a duty on the Project Manager and the Contractor to notify each other of an EWM as soon as they become aware of it. The Project Manager is to enter every matter so notified in the EWR.

The mechanism for making decisions on a notified EWM is an early warning meeting. It is a requirement of the contract that early warning meetings are held at regular intervals. The maximum interval is required to be specified in the Contract Data. The Project Manager is to instruct the Contractor to attend the first early warning meeting within two weeks after the *starting date*. The Project Manager and Contractor may instruct each other to attend an early warning meeting outside the scheduled meetings.

Such meetings are intended to deal with urgent matters that cannot wait until the next scheduled meeting. Sub-contractors and others that can assist in decision-making or the implementation of actions likely to be agreed at an early warning meeting must be required to attend it (Clause 15.2).

The Project Manager and the Contractor may give each other early warning notice of any matter that could increase the Contractor's total costs. Some may take a view that it is not right for a Project Manager paid by the Client to divert any attention to the Contractor's costs. However, such a view would be ignoring their Clause 10.2 duty of mutual trust and cooperation and the fact that, in cost based contracts, such attention would be directly in the Client's interest. The Project Manager would not be complying with this duty if drawing the matter to the Contractor's attention would save the Contractor costs. Such a view would also be losing sight of the reality that it is not in the Client's interest for the Contractor to run into preventable financial difficulty.

6.6 Risk Allocation Provisions

Clause 81.1 identifies issues that are Contractor's liabilities. They include personal injury suffered by the Contractor's employees, other people on the site or even members of public. Most of these risks would involve breach by the Contractor of its CDM duties or breaches by parties, such as sub-contractors, for whom the Contractor is responsible. Clause 82.1 makes the Contractor liable for "any cost which the Client has paid or will pay as a result" of any of the risks listed in Clauses 81.1. Clause 80.1 lists risks for which, as between the Client and the Contractor, the Client carries liability. Many of these risks are likely to the consequence of the Client's breach of duties under the

Regulations. The implication of the express reference to breach of statutory duty is that the Client carries liability for personal injury caused by breach of the Regulations by the Client or any other CDM duty holder (other than the Contractor) the Client contracts with for the purposes of the works. Clause 82.2 provides for the Client to indemnify the Contractor should the latter incur costs as a consequence of these risks.

6.7 People with Appropriate H&S Competences

The importance of CDM duty holders staffed by people with appropriate SKE is the bedrock of the CDM 2015. This approach is consistent with the management paradigm running through the NEC Contracts. The ECC anticipates entry of the following information on *key persons* in the Contract Data part two for the project: name; job; responsibilities; qualifications; and experience. To achieve this outcome, the Client specifies the numbers and attributes of the relevant categories of *key persons* in the Scope or the tender documents. Clause 24.1 puts the Contractor under an obligation to provide the *key persons* so identified. Under Clause 24.2 any replacement of a *key person* is subject to acceptance by the Project Manager. These features of the contract can be applied to ensure the competence necessary for effective H&S management. Clause 24.3 gives the Project Manager the power to instruct the contractor to remove any person from the project, which power can be exercised to remove individuals whose continued presence on the project could be detrimental to H&S.

6.8 Payment linked Health Safety Performance

The easiest way to incentivise compliance with the CDM 2015 is to have provisions imposing such compliance as a condition precedent to the Project Manager certifying achievement of Completion. Alternatively, as discussed under Section 6.1, Completion can be defined in the Scope to include the achievement of specific H&S targets. Where Option X16 applies, such provision holds up release of the retention until compliance. In view of the low margins in the construction industry, the retention often exceeds the contractor's entire profit from the project. Another option is to have items in the contract prices for specified CDM or wider H&S targets that are included in payment only when they have been achieved. A third possibility is to provide for a stated percentage of the PWDD to be retained in the assessment of the amount due for payment. Such provision would mirror Clause 50.5 which incentivizes submission of the first programme.

6.9 Contractor's Obligations in Respect of the Construction Phase Plan

The ECC contract anticipates the entry of an *access date* in the Contract Data part one. This is the date when the contractor may start work on site. Multiple *access dates* are entered where different parts of the Site are available from different dates. Clause 30.1 provides that no work should start on site until the first *access date*. Regulation 4(5)(a) requires the Client to ensure that a CPP is drawn up before the commencement of the "construction phase", which is defined in the Regulations to mean the period for work on site. As this constraint is not stated in the *conditions of contract*, it should be stated in the Scope.

The requirement in Regulation 12(4) that the PC should ensure that the CPP is reviewed, updated and revised from time to time throughout the duration of the project implies that work on site may commence before it is complete. Most revisions of the CPP are likely to be necessitated by changes to the Scope. It is also possible that a change to the CPP necessitates a change to the Scope. No issue of compensation arises where the PC is also the Contractor. However, there could be issues where these duty holders are different. The express requirement for cooperation and coordination among CDM duty holders and the Clause 10.2 duty to act in a spirit of mutual trust and co-operation suggest that both changes are best made by discussion. As this type of conduct cannot always be guaranteed, there is a case for putting a duty on the Project Manager to issue an instruction implementing the necessary change to the Scope where the PC is not also the main contractor. Such provision ensures that the contractor is compensated for change to work content or methods priced for in the contractor's tender.

6.10 Early Contractor Involvement

It is often argued that it would be impossible for the Client who uses the traditional procurement approach to comply fully with the CDM Regulations. Secondary Option X22 is designed to enable early contractor involvement in the design process at the pre-construction stage.

7 THE NEC4 PROFESSIONAL SERVICES CONTRACT

Civil engineers deliver a wide range of professional services on construction and engineering projects, The traditional services include: preliminary studies, surveys, geotechnical investigations, design, project management, and contract administration (Institution of Civil Engineers, 2015). The CDM Regulations have had the effect of extending the range of services delivered by civil engineers to include the provision of services as PD or PC. The Professional Services Contract (PSC) has been designed for use in procuring these types of services. The documents making up a contract in this form are: Form of Agreement, conditions of contract, Contract Data part one and two; Prices/Activity Schedule; and Scope. These documents mirror their equivalents in the NEC4 ECC in relation to their function. The composition of the package of services to be delivered by a Consultant depends on the Client's decisions implementing its procurement and contract strategies.

In conformity with the NEC policy on flexibility, the PSC does not prescribe the service to be provided. That detail is to be provided in the Scope, which is not only to describe the service to be delivered but also to identify any constraints to its delivery. According to the accompanying User Guide (NEC, 2017e), information relevant to H&S to be provided in the Scope include: existing information on the service to be delivered (eg, PCI); project team; communication systems; management procedures; interfaces with third parties; co-ordination and co-operation; H&S requirements; and programme information. The PSC has been drafted with the traditional services of engineers in mind although the current version is flexible enough to be also appropriate where the Consultant is not only a designer but also a PD.

The nature of the role of designer or PD is one of delivery of professional services. The duties in these roles may be provided as part of the much wider role of the traditional Architect/Engineer as project lead on construction and engineering projects. On design and build (D&B) projects, the PD may be the main contractor (with or without external CDM advisors) or an independent design consultant. A PD must be appointed before tendering for the appointment of the D&B contractor where the drawing up of the Client's requirements entails design. The PD at this stage may be an independent design consultant although a contractor may take on this role where there is early contractor involvement.

Specialist H&S professionals not from these traditional professional backgrounds also offer services as PDs. Where the PC role is provided by the main/prime contractor for the project, the PC CDM role may be subsumed as part of the duties of the main contractor under the main construction contract. However, it is possible for the PC role to be undertaken by a professional in a similar way to architects and engineers acting as professional construction managers where a project is being procured by the construction management procurement route. Regulation 5(1) expects the PD to be appointed in writing. A written appointment may be a simple letter offering the role and its acceptance by the intended appointee. However, the appointment may be a formal contract for professional services with detailed terms on the performance of the contract by both parties.

As with its counter-part in the NEC4 ECC, the conditions of contract in the PSC contract are the terms governing the details of the performance required of each party. The only references in them to H&S are in Clauses 24.3, 31.2 and 91.3. The Consultant

has a duty under Clause 24.3 to "act in accordance with the health and safety requirements stated in the Scope". As a minimum, the Scope should state the obligation of the Consultant to comply with any statute, statutory instrument, regulation or other rule having the force of law relevant to the works or the performance of its other obligations under the contract. The Consultant's CDM duties as Designer or PD, as the case may be, should also be stated. Finally, the specific tasks in the particular assignment must be set out in the Scope for ease of enforcement. Clause 31 of the PSC conditions of contract provides for programmes for delivery of the services of the Consultant in terms that mirror the programming requirements of NEC4 ECC. Clause 31.2 requires the Consultant to indicate in any programme submitted to the Client information on its arrangements for meeting the H&S requirements. Under Clause 91.3 the Client may terminate the contract for the Consultant's substantial breach of "safety regulation", which includes the CDM Regulations.

As is common to most NEC contracts, the Consultant and the Client are to act "in spirit of mutual trust and co-operation" (Clause 10.2). There is a wider duty on the Consultant to co-operate with the Client and "Others", which term is defined in Clause 11.2(7) as "people or organisations who are not the Client, the Consultant, the Adjudicator or any employee, Subconsultant or supplier of the Consultant.". Others therefore include designers, the PD, the PC and the Contractor where they are independent of the Consultant.

The performance of the role of a CDM Client requires relevant skills, knowledge and other professional resources. A Client without these attributes may consider appointing an appropriate professional to perform the tasks within the statutory duty on its behalf.

Examples of tasks that can be performed by a professional on the Client's behalf include: the preparation of the PCI; tendering for the appointment of duty holders; and assessment of their SKE/OC. Such an arrangement does not transfer the criminal liability risk but the prosecuted Client would have a cause of action for professional negligence against its CDM Agent. Recoverable compensation in such action would include legal costs of defending the criminal prosecution and damages for reputational loss. An alternative arrangement is to extend the role of the PD to take over performance of some of the duties of the Client.

The Professional Services Short Contract (PSSC) (NEC, 2017f) is an abridged version of the PSC for smaller commissions. This form would be more appropriate than the PSC where the Consultant is providing only PD services on a project. The documents making a contract in the PSSC form are: Form of Agreement (Consultant's Offer and the Client' Acceptance); Conditions of Contract, Contract Data, Price List; and Scope. The only reference to H&S in the Conditions of Contract for the PSSC is in Clause 90.3, which entitles the Client to terminate the Consultant's appointment for substantial breach of H&S regulation. The Scope must therefore be comprehensive as to the service to be provided, the programme for delivering it and the parties' rights and obligations in relation to performance of the CDM role.

8 DISCUSSION

A shortcoming of prosecution of H&S offences is that it is reactive; by the time the HSE gets involved, the impact on the Client may be unstoppable or may even have occurred already. Also, the HSE has resources to exert such control over only a tiny fraction of the projects that are ongoing at any given time. A more effective control instrument is an appropriate contract with each of the duty holders which the Client can use as a lever to enforce performance by its appointees.

The legislation does not identify in detail the actions that must be taken to comply with the Regulations. Performance of such details can be imposed as contractual terms, thus empowering the Client to enforce them before failures result in a breach of the statutory duty. Furthermore, without detailed terms on what the duty holder must do to comply with its duty, there could be divergence between the expectations of the duty holder and those of the Client, thus producing conflict that can negatively affect the project. A contractual relationship also offers the Client the opportunity to delegate, to appropriate duty holders, some of the Client's practical procedures for compliance with it duties under the Regulations. For example, the PD is only required to assist the Client with the preparation of the PCI (Regulation 11(6)(a)). However, the Client and the PD may agree in their contract that the PD not only prepares the information but also undertakes the tasks necessary for producing it (eg, identification of surveys the Client must commission to obtain the necessary information). The Client cannot however transfer the risk of prosecution for failure to provide, to designers and contractors, PCI that is fit for purpose.

The multiple level of sub-contracting raises issues concerning how the Client can exert influence throughout the entire project supply chain. For example, the information necessary for the HSF may be scattered across the supply chain. This reality raises questions as to how to compel all sub-contractors at all levels to supply necessary information in their possession to the PD. Enforcement throughout the entire supply chain can be enabled through contracts that are back-to-back with each other in relation to CDM duties. For example, the duty to supply the information must be in not only the contract between the Client and the main contractor but also all sub-contracts.

Traditional construction contracts have provided for specific project participants, such as the Client's Project Manager or Representative, Contract Adminstrator, Project Quantity Surveyor, and Supervisor, with specific duties that must be performed for proper contract management. The CDM Regulations introduce participants with H&S hats. There can be confusion over the extent of a participant's role and the necessary interaction with other participants or roles. An appropriate contract is the only way to ensure embedment of the CDM procedures and duty holders into the general contract management system.

Users of the NEC contracts need to pay particular attention to structuring the relevant contract documents for consistency with the CDM documents. For example, much of the contents of the PCI would belong to the categories of information that should be in the Site Information contract document, e.g, structures on the site, and reports of subsoil and other surveys. Duplication of some categories of information in the two documents carries the risk of inconsistencies arising from failure to update both documents contemporaneously. Keeping the common information in one document and making

references to it from the other is therefore to be preferred to duplication. Reference to information in the PCI from the Site Information contract document suffers from the disadvantage that, by its very nature, the PCI is a live document that must be revised to update it for new information. It is also to be noted that it is not a contract document. NEC guidance advises pointing from the PCI to factual information in the Site information whilst avoiding the PCI straying into requirements and constraints, which should be in the Scope. There are similar challenges with the CPP. The Contractor and all tiers of sub-contractors are required by Regulation 15(3) to comply with the parts of the CPP relevant to their work on the project. Change to the CPP made available to bidders would have cascading impact on compensation events and associated adjustment of rights and obligations with respect to payment and the timetable for carrying out the works.

The conduct and culture that use of the NEC contract is intended to engender are precisely the behaviours of cooperation and coordination that duty holders under the Regulations are required to adopt in the management of H&S. Bolt *et al* (2012) found that the contractual framework for the procurement of the built facilities for the 2012 London Olympic Games, which was based on NEC3 contracts, was a major contributor to delivery of the projects with outstanding H&S outcomes. But mere use of the contract by parties without buying into the NEC philosophy is unlikely to be the silver bullet for leveraging good H&S outcomes. Not only must the Client exhibit these behaviours but its assessment of the SKE/OC of candidates for appointment as duty holders or other project participants must therefore take account of these factors.

The general approach of the NEC contracts is that the detailed CDM related obligations are provided in the Scope. The terms concerning H&S in the conditions of contract would be of limited effectiveness without clear statement of these details in the Scope. The importance of getting the drafting of this document right cannot therefore be overemphasised. This approach has the advantage of furthering the interests of the publishers of the contracts in making them usable internationally whilst UK users of the contract can draft the Scope to impose the CDM obligations as contractual requirements. However, this approach to engaging with the CDM Regulations has the shortcoming that it leaves too much to the competence of the drafter of the Scope. Competence requirements of the drafter include: knowledge and understanding of the Regulations; knowledge of the terms of the NEC4 contract to avoid inconsistency between the Scope and the other contract documents; and competence in the NEC drafting style.

Assuming possession of the necessary competences, there are a number of points the drafter must still bear in mind in the drafting of the Scope:

- Copying out relevant provisions from the Regulations is likely to result in provisions that are too general to be of much use for practical enforcement purposes.
- As a change to information in the Scope is a compensation event (Clause 60.1(1)), there is need for care not to include in the Scope matters that are subject to change but for which the Client does not bear the risk.
- The legislation does not prescribe the content of the CDM documents. The Scope would be the appropriate place in which to specify the types of information to be provided and the templates for providing the documents.

- In line with the policy that Completion under the ECC should be defined in the Scope, the definition should include a statement that Completion is not achieved unless and until the Contractor has complied with specific CDM duties such as provision of information necessary for the HSF.

As the competence of the drafter of the Scope for particular projects cannot always be guaranteed, there is a strong case for standard provisions as part of the ECC conditions of contract that reflect the reality that a Contractor with some responsibility for design may be required to exercise concurrently the roles of not only a "contractor" under the Regulations but also those of "designer", "principal designer", and "principal contractor". An appropriate alternative approach to implementing CDM related duties into the ECC without detracting from the need for flexibility for international use would be to have CDM related terms as a CDM Optional Clause (eg, as Option Y(UK) 4) that UK users may adopt. The provisions in such an optional clause may include:

- the names and contact information of the PD and PC linked to entries for them in the Contract Data;
- names of designated staff on the project;
- how duty holders or their designated staff on the project may be changed;
- the Parties' obligations to comply with their respective obligations under the Regulations;
- the Contractor's duty not to start work on site before the CPP is drawn up;
- the Contractor's obligation to comply with the CPP and to ensure that all sub-contractors also do so;
- the parties' mutual right to terminate the contract for significant breach of their CDM obligations;

- the Contractor's obligation to provide information for the HSF and ensure that all sub-contractors do the same;
- the Project Manager's power to withhold approval of sub-contractors under Clause 26 if the sub-contract does not include appropriate terms on H&S; and
- the Project Manager's duty to issue instructions to implement changes to the CPP that impact on the Scope where the Contractor is not also the PC.

Some of the Client's consultants on the project, such as the lead consultant and others who prepared the documents for the project, may have legal duties at common law (for example, see: *Townsend (Builders) Ltd v Cinema News & Property Management Ltd* (1959) 20 BLR 118; *BL Holdings v Robert J Wood & Partners* (1979) 12 BLR 1; *Pozzolanic Lytag Ltd v. Brian Hobson Associates*(1999) 15 Const. LJ 135) to advise the Client on the adequacy and implications of the contractual provisions or the Client's need for such advice from appropriate experts (Furst and Ramsey, 2016; Dennys and Clay, 2015; Speaight and Stone, 2010). These duties may apply to the need for provisions in the Scope that adequately address obligations under the Regulations.

9 CONCLUSIONS

Although the HSE is the statutory enforcement authority for H&S legislation on construction projects, it is arguable that the burden of enforcement of H&S must lie more with the project owner who initiated the project. The most effective enforcement instrument available to the Client, who has no powers of prosecution, is an appropriate contractual relationship with each of the duty holders that imposes compliance with the

applicable CDM duties as contractual obligations. The approach of the NEC family of contracts is to state in the conditions of contract document of the relevant contract a general obligation to comply with H&S legislation, leaving the detailed requirements to be captured in the Scope drafted for the particular project. UK users must therefore ensure that the drafter of the Scope has the competence necessary to produce a document in the NEC drafting style that adequately captures the specific H&S obligations under the Regulations. Training in the drafting of the H&S section of the Scope is an essential element of the current approach. Revision of the user guides to provide more detailed guidance on the drafting of the CDM related content of the Scope contract documents is recommended. An alternative approach to providing for the CDM Regulations that the promoters of the NEC contracts may wish to consider having a CDM Option for adoption by UK users.

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