

# Safe Work Australia Review of the Model WHS Laws 2018

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## Introduction

This submission asks that the model WHS laws adopt and incorporate the United Kingdom's Construction (Design and Management) Regulations 2015<sup>1</sup> ("CDM 2015"). There is overwhelming evidence that more than half of the fatal injuries sustained by construction industry workers could have been avoided if project owners and designers had been subject to more stringent duties under WHS legislation. The original model WHS law failed to learn from the UK's superior regulatory framework and *its superior performance,* despite pressure from key construction industry participants to look to the UK for guidance.

The Terms of Reference for the Review of the Model WHS Laws include the requirement to consider whether "the framework of duties is effective at protecting workers and other persons against harm to their health, safety and welfare and can adapt to changes in work organisation and relationships"<sup>2</sup>

The greatest weakness in the current framework of duties is its failure to regulate construction from concept to completion - unlike in the UK, Australian WHS law does not adequately manage the fatal injury risks that arise from the decisions and processes undertaken by project owners and designers before construction commences.

Australia's WHS regulatory focus is on the construction phase of a build. By then, it is too late fatality risks have already been designed into the process through procurement, program, project management and design decisions. Construction fatalities will significantly reduce if we regulate construction from concept to completion. The UK's 25 years regulating the interactions between project owners, clients, designers and contractors gives us a proven off the shelf solution.

There is no credible basis for not adopting CDM 2015 into the model WHS laws.

"Safety performance in the construction industry is a challenge to all of us who work in the industry. The rate of injury and death is unacceptably high, and significant improvement has been elusive. It is distressing that this is particularly so in terms of the number and frequency of fatalities"

"It is no coincidence that the best performances of the industry have been achieved where there is a high degree of leadership and commitment shown by each of the main participants: the clients, the designers and the constructors"

> Bill Wild Chair Engineers Australia Taskforce for Construction Safety 2007



## Australia and the UK: Comparative Performance

The Australian construction industry performs at a markedly worse level than its UK counterpart<sup>3</sup>:



The UK trend is one of consistent improvement, while Australia demonstrates a marked decline in performance. The issues that typically arise in comparing data across jurisdictions do not affect the materiality of this comparison.

At present, an Australian construction worker is one and a half times more likely to die on the job than his UK counterpart. This unacceptable situation demands far more attention from regulators and industry stakeholders.

"Nothing can mend the broken heart of a mother. Nothing. You try. You try, because you have to. You have to try. But you always come back to it. You always say, why did it...? It shouldn't have happened. It should not have happened"

> 'Traumatic Work-Related Death in the Construction Industry: Experiences of Victims' Families' LR Matthews, P Bohle, M Quinlan & O Rawlings - Way Faculty of Health Sciences, University of Sydney September 2011



## **Client and Designer Influences on Construction Safety**

The influence of design in delivering safe outcomes has been known to the safety "profession" for as long as there has been such a calling<sup>4</sup>. More recently, the Construction Industry Institute<sup>5</sup> commissioned research by Professors Jimmie Hinze and John Gambatese in the 1990s<sup>6</sup> which identified the myriad benefits flowing from designing for construction safety, including reduced fatalities and injuries, lower project costs and improved project durations. There is no shortage of data from the USA, the UK and Europe indicating that at least half of all construction fatalities could have been prevented at the design stages of the project, and that the ability for construction contractors and construction workers to effectively manage those risks was significantly reduced by the time the site was mobilised<sup>7</sup>.

In 2004, the UK HSE commissioned an analysis<sup>8</sup> of 91 randomly selected construction industry fatalities, with the authors concluding that "almost half of all accidents in construction could have been prevented by designer intervention and that at least 1 in 6 of all incidents are at least partially the responsibility of the lead designer in that opportunities to prevent incidents were not taken"<sup>9</sup>.

In an analysis of its own fatal incidents carried out by Leighton Holdings in 2011 – then Australia's largest construction company – it was found that "a significant proportion of construction industry fatalities could have been avoided if the construction risks had been considered earlier in the procurement process – that is, at the design and planning phases of the project"<sup>10</sup>. This analysis was followed by Leighton Holdings publicly calling for the adoption of CDM 2007 into the Model WHS Regulations<sup>11</sup>, stating that "we know that a significant proportion of construction safety incidents, possibly as many as 50% of all traumatic injuries and fatalities stem from failure to take account of occupational health and safety considerations at the design and procurement stage of a construction project".

"The study of the Life Cycle Safety process revealed that it was successful in eliminating or mitigating significant safety and health hazards during construction. The LCS surfaced and promoted design changes that otherwise might not have been implemented under the traditional technical design review process only. This success is enhanced through the consideration of design changes early in the project. The process should ideally start in the programming phase and continue through detailed design"

M Weinstein, J Gambatese & S Hecker 'Can Designers Improve Construction Safety? Assessing the Impact of a Collaborative Safety in Design Process' Journal of Construction Engineering and Management October 2005 p. 1133



Not only do clients, project owners and designers have the ability to reduce the incidence of construction fatalities, they are more often than not the **only parties** who can eliminate or reduce fatal risk through the use of higher order controls. The model law requires (NSW Regulation 36) that where it is not reasonably practical for a risk to be eliminated, the duty holder must first seek to substitute some other thing or process that reduces the risk; isolate the hazard from workers; or implement engineering controls. Where these controls cannot be deployed, the duty holder must revert to administrative controls and then rely on the use of suitable protective equipment.

As demonstrated by the Time/Safety Influence curve<sup>12</sup>, higher order controls are generally only available at the planning and pre-construction phases of the project. If the fatal risks are not addressed at those times, then the ability to properly manage them is largely lost.



By adopting CDM 2015, the model laws will enable higher order controls to be more frequently and more effectively deployed to fatal construction risk, thereby achieving one of the fundamental objectives of the legislation. By forcing contractors and construction workers to have no option but to rely on lower order administrative controls and PPE, we are guaranteeing that Australian workers will be continue to be killed or maimed on site.

"It is difficult for engineers to change human nature and therefore, instead of trying to persuade people not to make errors, we should accept people as we find them and try to remove opportunities for error by changing the work situation – that is, the plant or equipment design or the method of working"

> Trevor Kletz <u>An Engineer's View of Human Error</u> Institute of Chemical Engineers, London 2001 p. 1



## **UK Regulation of Design for Constructability**

In 1992, the European Economic Community issued Directive 92/57/EEC<sup>13</sup> dealing with minimum requirements for construction projects. This directive included the requirement that "the project supervisor and, where appropriate, the client shall take account of the general principles of prevention...when deciding architectural and/or organisational aspects, and when estimating the completion time of works or work stages". The UK's response to this directive was the first of the CDM regulations in 1994<sup>14</sup> introducing broader duties on clients, developers and designers. CDM 1996<sup>15</sup> saw a significant expansion in the scope of the regulation into high risk construction activities.

A major review of the efficacy of the CDM regime took place over the period 2002 – 2006, and in 2007 a new CDM regulation was introduced<sup>16</sup>. CDM 2007 integrated all construction-related regulations into a single instrument and sought to reduce the perceived emphasis on paperwork and form-filling at the expense of an integrated construction planning process. With respect to client duties, CDM 2007 made it clear that clients must take reasonable steps to ensure health, safety and welfare on site, and to ensure that the design of any workplace complies with the broader occupational health and safety regulatory framework. CDM 2007 also made the client's duty non-delegable – that is, clients could obtain advice, but they could not transfer their legal responsibilities.

In November 2009, an evaluation of CDM 2007 was commenced. The result of that evaluation process was the Evaluation of the Construction (Design and Management) Regulations 2007<sup>17</sup>. That report found that there had been "improvements in relation to the Client, appointing organisations and commitment to site workers, whilst Principal Contractors and Contractors highlighted improvements in risk management on-site. Principal Contractors also highlighted improvements in relation to design, maintenance and use"<sup>18</sup>. Following a stakeholder consultation process, the current iteration of the regulation – CDM 2015<sup>19</sup> took effect in April 2015. Relevant key changes brought about by CDM 2015 are summarised below<sup>20</sup>:

- the structure of the legislation has been streamlined and simplified and has been aimed at small to medium sized projects which tend to be operated by the SME end of the market.
- changes within the Client's duties will make them much more accountable for the impact of their decisions, their approach to project health and safety management and the way in which they ensure that the Principal Designer and Principal Contractor comply with their own duties.
- the current role of CDM Coordinator will not exist in the new regulations and a new role of Principal Designer has been defined. The Principal Designer will be appointed by the Client and must be the Designer who is in control of the pre-construction phase of the project. The roles carried out by the Principal Designer include:
  - a. Helping the Client prepare the pre-construction information and ensuring that this is received promptly by the Designers and Principal Contractor
  - b. Ensuring all Designers carry out their duties
  - c. Plan, manage and monitor the pre-construction phase and coordinate matters relating to safety during the preconstruction phase to ensure that so far as is reasonably practicable the project is without risk to health and safety



- d. Eliminating or controlling risks throughout the design work, taking into account the general principles of prevention
- e. Ensuring there is sufficient co-operation and co-ordination between duty holders
- f. Liaising with the Principal Contractor for the duration of the Principal Designers appointment to share information relevant to the planning, management and monitoring of the construction phase and coordination of health and safety matters during the construction phase
- g. Preparing the health and safety file
- the Client is to ensure a Construction Phase Plan is in place for all projects, irrespective of size or duration.
- the Client must ensure that those appointed (Principal Designer, Principal Contractor, Designer or Contractor) can demonstrate appropriate skills, knowledge, experience and organisational capability
- changes within the Client's duties will make them much more accountable for the impact of their decisions, their approach to project health and safety management and the way in which they ensure that the Principal Designer and Principal Contractor comply with their own duties.

The UK now has over 25 years' experience in the regulation of client and designer duties in the construction industry. While there have been a number of justified criticisms of the earlier iterations of CDM, the UK Health and Safety Executive has demonstrated a mature, sophisticated and effective approach to the management of fatal risk in construction, and the CDM 2015 Regulation represents a best-in-class regulatory model for Safe Work Australia to emulate.

"The better one understands a risk and the more insightfully one picks it apart, the less brute force will be needed to contain or suppress it"

> Malcolm K Sparrow <u>The Regulatory Craft</u> Brookings Institution Washington DC 2000 p. 256



## CDM 2015 and the Model Law: Comparison of the Duties

On the surface, the model law does address some of the issues that CDM 2015 deals with, however it does so obliquely, and fails to provide any formal framework or process for the assessment and management of risk across the project procurement chain. It therefore falls well short of best practice as exemplified by CDM 2015.

Appendix One contains a comparison of the key provisions of CDM 2015 with the model law (Work Health and Safety Act 2011 NSW). What stands out in that comparison is how CDM 2015 systematically establishes both duties and processes for clients, designers and contractors. The following analysis highlights the shortfalls in the model law. References are to the NSW Act and Regulations.<sup>21</sup>

### **Client Duties**

Under S19 the client holds the general duty of care in its capacity as a PCBU. This duty extends to workers "caused to be engaged" by the PCBU and "workers whose activities are influenced or directed" by the PCBU. Whilst it is arguable that the client in some sense "causes" construction workers to be engaged on a project, and that the client "influences" contractors' workers; it would require a singularly imaginative regulator to draw the client into an investigation, let alone a prosecution of a construction site fatality.

Regulation 294 requires the client to consult with the designer to ensure that risk is eliminated during construction work, including the provision of any relevant information held by the client. Regulation 295 requires the designer to provide a written report to the client which deals with risks during the construction phase. Regulation 296 requires that the client provide the contractor with information in relation to risks "at or in the vicinity of" the site. There is no requirement for the client or the designer to interact with each other or with contractors iteratively and collaboratively with the stated objective of eliminating fatal risk to construction workers. Regulation 296 *does not* explicitly require the client to provide the Regulation 295 Report to the contractor. Hazards and risks "in the vicinity of the workplace" are not the same as hazards and risks arising from construction processes and activities.

Finally, the practical effect of a Principal Contractor appointment under Regulation 293 is to largely absolve the client from any duty or responsibility to the construction workforce. By contrast, CDM 2015 specifies a series of duties that require the client to address construction risk from the very earliest stages of project development, and to maintain a supervisory role in relation to designers and the principal contractor throughout the project.

A highly pertinent example is CDM 2015 S4. Under this provision, the client is required to ensure that there are adequate resources – including sufficient time – to enable the construction work to be carried out safely, and there is also a positive obligation to ensure that the provision of adequate time and resources "are maintained and reviewed throughout the project". It is well established in Australia that projects in distress – whether by time, cost or both – constitute a significant additional risk factor for workers. CDM 2015 goes some way to recognising and mitigating that risk.



"It may be that the original estimate of the time to be allowed for completion of the project was not long enough, thus enforcing a schedule which was too tight. Be that as it may, the delays caused by the inadequacies of the contractors soon created a situation where a constant feeling of pressure to speed the lagging programme became oppressively evident"

> Report of the Royal Commission into the Failure of West Gate Bridge State of Victoria 1971 p.98

#### **Designer Duties**

Under S22(2)(d), designers hold a duty to ensure the elimination of risk to construction workers, however there is no process by which this duty is given practical effect. As for the client duties, discussed above, Regulation 295 requires the designer to provide a written report to the client dealing with construction risk, but that is the end of it. If we accept the overwhelming evidence that over half of construction fatalities can be avoided at the design stage, then there must be a mandatory, workable and consistent process by which designers are required to be sufficiently qualified to understand, assess and mitigate construction risk; and work cooperatively and constructively with the Principal Contractor in respect of managing construction hazards and latent risks such as program and construction methodology.

S46 of the Act requires consultation, co-operation and co-ordination between duty holders, and therefore loosely establishes a shared duty among clients, project owners, designers and contractors. This mechanism is inadequate in two fundamental ways. Firstly, the practical effect of the model law is that the project is handed off sequentially. The client initiates the project and hands it to the designer, and then the client hands the project to the Principal Contractor. CDM 2015 requires that all three parties maintain an ongoing, collaborative and iterative dialogue throughout the design, pre-construction and construction phases. Secondly, the model law fails to establish any form of process by which collaboration can be given effect. Again, this can be contrasted with CDM 2015 which requires the preparation of a construction phase plan by the Principal Contractor, and a Health and Safety File by the Principal Designer. By establishing these mechanisms, CDM 2015 provides a process to deliver the desired outcome – shared responsibility and collaborative management of fatal risk.



## CONCLUSION AND RECOMMENDATIONS

The Review of the Model WHS Laws offers a welcome opportunity to remedy the failure to include CDM 2007 in the original harmonised regulatory framework in 2010 - 11. CDM 2015 represents a refined, holistic and proven regulatory system that engenders cooperation and coordination in eliminating fatal risks in the construction industry.

#### **Recommendations:**

- 1. That the model WHS laws be amended to include CDM 2015 in its entirety.
- 2. That the States of Victoria and Western Australia adopt CDM 2015 in a manner identical to the model WHS laws such that there is a single national approach to the effective management of fatal risk in construction.
- **3.** That Safe Work Australia take the necessary steps to acquire the CDM 2015 support materials and related intellectual property from the UK HSE.
- 4. That Safe Work Australia and the Commonwealth and State regulators develop a single, nationally consistent suite of systems, documents and training based on the UK HSE experiences and materials; and that construction industry participants, including clients, project owners, designers and principal contractors be provided with the opportunity to participate in training sessions facilitated by suitably credible providers.
- 5. That Safe Work Australia and the Commonwealth and State regulators adopt a national target of reducing construction fatalities by 10% per annum and that each jurisdiction be required to report annually on the effectiveness of its legal, educational and enforcement activities in respect of achieving that target.



	APPENDIX ONE	
	CDM 15	WHS ACT/REG
	Requirement of the Regulation	(References to NSW
		legislation)
4	A client must make suitable <sup>1</sup> arrangements for managing a project, including allocation of sufficient time and	
	resources	No comparable provision
	A client must ensure that these arrangements are maintained and reviewed.	No comparable provision
	A client must provide pre-construction information <sup>2</sup> to all designers and contractors appointed or being	
	considered for appointment.	No comparable provision
	A client must ensure that a construction phase plan <sup>3</sup> is drawn up by the contractor.	No comparable provision
	A client must ensure that the principal designer prepares a health and safety file for the project <sup>4</sup> .	No comparable provision
	A client must take reasonable steps to ensure that the principal designer complies with his duties.	No comparable provision
	A client must take reasonable steps to ensure that the principal contractor complies with his duties.	No comparable provision
5	A client must appoint a principal designer with control over the pre-construction phase <sup>5</sup> .	No comparable provision

<sup>&</sup>lt;sup>1</sup>. "Suitable" means that the construction work can be carried out safely.

<sup>&</sup>lt;sup>2</sup> "pre-construction information" means information in the client's possession or which is reasonably obtainable by or on behalf of the client, which is relevant to the construction work and is of an appropriate level of detail and proportionate to the risks involved, including—

<sup>(</sup>a) information about-

<sup>(</sup>i) the project;

<sup>(</sup>ii) planning and management of the project;

<sup>(</sup>iii) health and safety hazards, including design and construction hazards and how they

will be addressed; and

<sup>(</sup>b) information in any existing health and safety file;

<sup>&</sup>lt;sup>3</sup> Refer S 12, below

<sup>&</sup>lt;sup>4</sup> Refer S 12, below

<sup>&</sup>lt;sup>5</sup> "pre-construction phase" means any period of time during which design or preparatory work is carried out for a project and may continue during the construction phase.



8	A designer or contractor appointed to a project must have the skills, knowledge and experience necessary to fulfil	
	their role in a way that secures the health and safety of any person affected by the project.	No comparable provision
	A person who is responsible for appointing a designer or contractor must take reasonable steps to satisfy	
	themselves as to the designer's or contractor's capabilities.	No comparable provision
9	A designer must not commence work on a project unless satisfied that the client is aware of his duties.	No comparable provision
	When preparing or modifying a design the designer must take into account the principles of prevention to	
	eliminate foreseeable risks to any person carrying out construction work or maintaining, cleaning or working at/in	Section 22 (2) (d) & (e)
	a structure.	Section 22 (4) & (5)
	Where such risks cannot be eliminated the designer must ensure relevant information is placed in the health and	
	safety file	No comparable provision
11	The principal designer must plan and manage the pre-construction phase and coordinate health and safety	
	matters to ensure that the project is carried out without risk to health and safety – with particular attention to	
	planning program and estimating the time needed to complete phases of work	No comparable provision
12	The principal contractor must draw up a construction phase plan which must set out the health and safety	
	arrangements for the project.	No comparable provision
	The principal designer must assist the principal contractor in preparing the plan.	No comparable provision
	During the pre-construction phase the principal designer must prepare a health and safety file which must	
	contain information relating to the project which is likely to be needed during any subsequent project to ensure	No comparable provision
	the health and safety of any person.	
	The principal designer must ensure that the health and safety file is reviewed and updated	No comparable provision
15	A contractor must not carry out construction work in relation to a project unless satisfied that the client is aware	
	of the duties owed by the client	No comparable provision



# APPENDIX TWO

Stephen Sasse has held a number of senior executive roles in blue chip Australian and international companies. With respect to work health and safety, his experience includes:

National Dairies Limited:	established and managed the company's inaugural WHS function,
	including managing self-insurance in SA
Goodman Fielder Limited:	initiated the company's WHS improvement strategy and developed
	the highly effective 'Walk, Talk & Care' strategy
Transfield Construction	management responsibility for the WHS function
John Holland Group:	management responsibility for the WHS function including
	transitioning the business into Comcare
Leighton Holdings:	developed the WHS governance system in preparation for the
	model WHS laws.

In 2006 -7 Stephen was a member of the Engineers Australia Taskforce for Construction Safety.

Stephen is an executive and non-executive director on a number of companies, and consults to private and public sector clients in a wide range of areas, including construction procurement, labour productivity improvement, cost reduction, workplace health and safety governance and operational mobilisation of start-ups.

Stephen holds a First Class Honours Degree in Arts from the University of Melbourne, and numerous construction, rail and mining tickets; including Demolition Supervision (Unrestricted).

## REFERENCES



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- <sup>13</sup> <u>https://osha.europa.eu/en/legislation/directives/15</u>
- <sup>14</sup> http://www.legislation.gov.uk/uksi/1994/3140/introduction/made
- <sup>15</sup> <u>http://www.legislation.gov.uk/uksi/1996/1592/contents/made</u>
- <sup>16</sup> <u>http://www.legislation.gov.uk/uksi/2007/320/contents/made</u>
- <sup>17</sup> http://www.hse.gov.uk/research/rrpdf/rr920.pdf
- <sup>18</sup> HSE UK "Evaluation of the Constriction (Design and Management) Regulations 2007" p. ix
- <sup>19</sup> <u>http://www.legislation.gov.uk/uksi/2015/51/introduction/made</u>
- <sup>20</sup> Cash M "CDM 2015: A Brief Update" IOSH UK 2015
- <sup>21</sup> Work Health and Safety Act 2011 & Work Health and Safety Regulation 2017

<sup>&</sup>lt;sup>1</sup> http://www.legislation.gov.uk/uksi/2015/51/pdfs/uksi 20150051 en.pdf

<sup>&</sup>lt;sup>2</sup> <u>https://www.safeworkaustralia.gov.au/law-and-regulation/model-whs-laws/review-model-whs-laws/review-model-whs-laws-terms-reference</u>

<sup>&</sup>lt;sup>3</sup> <u>https://www.safeworkaustralia.gov.au/statistics-and-research/statistics/fatalities/fatality-statistics-industry</u> Safe Work Australia WORK-RELATED TRAUMATIC INJURY FATALITIES, AUSTRALIA 2012 October 2013 <u>https://www.europeandataportal.eu/data/en/dataset/riddor-reporting-of-injuries-diseases-and-dangerous-occurrences-regulations</u>

<sup>&</sup>lt;sup>4</sup> Heinrich H.W <u>Industrial Accident Prevention</u> McGraw Hill Book Company New York and London 1941 p. 171. <sup>5</sup> <u>https://www.construction-institute.org/</u>

<sup>&</sup>lt;sup>6</sup> Gambatese, J. A., Hinze, J. and Haas, C.T. (1997). "Tool to design for construction worker safety." Journal of Architectural Engineering 3(1): 32-41.

<sup>&</sup>lt;sup>7</sup> Mroszczyk, J.W Ph.D., P.E., CSP "Designing for Construction Worker Safety" www.asse.org/assets/1/7/John Mroszczyk Article1.doc

<sup>&</sup>lt;sup>8</sup> Habilis Ltd "Peer Review of Analysis of Specialist Group Reports on Causes of Construction Accidents" UK HSE 2004

<sup>&</sup>lt;sup>9</sup> Ibid. p. vii

<sup>&</sup>lt;sup>10</sup> Sasse, Stephen – Leighton Holdings Limited "Harmonisation and Safety" Address to Infrastructure Partnerships Australia 4 August 2011