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WHS in Australia — designers' obligations

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Introduction

A previous paper[1] outlined the significant changes in work health and safety (WHS) legislation in Australia since 2011. That paper discussed in general terms that one of the significant developments in the new harmonised Work Health and Safety Act (the Act) and the Work Health and Safety Regulations (Regulations) is the formalisation of higher WHS obligations on organisations that design, manufacture, import or supply products. However, as noted in the previous paper, the new harmonised legislation has not yet been implemented in all Australian states and territories

This paper looks in more detail at the specific new WHS obligations that have now been imposed on a design organisation by the harmonised legislation.

Duties of Care under the Act

The Act imposes the primary duty of care for WHS on a Person Conducting a Business or Undertaking (**PCBU**). The term PCBU replaces the term "employer" in the superseded legislation.

Primary duty of care

All organisations that are a PCBU, including design organisations, must comply with the primary duties of care. These primary duties of care are identified in s 19(3) of the Act as specific obligations on PCBUs to ensure the health and safety of workers so far as is reasonably practicable. These are:

- the provision and maintenance of a work environment without risks to health and safety;
- the provision and maintenance of safe plant and structures;
- the provision and maintenance of safe systems of work;
- the safe use, handling and storage of plant, structures and substances;
- the provision of adequate facilities for the welfare at work of workers in carrying out work for the business or undertaking, including ensuring access to those facilities;
- the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business or undertaking; and
- the health of workers and the conditions at the workplace must be monitored for the purpose of preventing illness or injury of workers arising from the conduct of the business or undertaking.

In addition to the primary duties of care, the Act specifies further duties of care for PCBUs involved in the following:

- management or control of workplaces;
- management or control of fixtures, fittings or plant at workplaces;
- design of plant, substances or structures;
- manufacture of plant, substances or structures;
- importation of plant, substances or structures;
- supply of plant, substances or structures; or
- installation, construction or commissioning of plant or structures.

PCBUs that design plant, substances or structures

A designer of plant, substances and structures has specific duties of care detailed in s 22 of the Act. This section sets out the additional health and safety duties a PCBU has if that business or undertaking involves designing plant, substances or structures that are to be used or could reasonably be expected to be used at a workplace. Practically, these criteria would capture activities conducted by many engineering design organisations.

Designed to be without risks to the health and safety of persons

The first of these additional duties, as detailed in s 22(2) of the Act, states that **the designer must ensure, so far as is reasonably practicable, that the plant, substance or structure is designed to be without risks to the health and safety** of specific persons. These persons are stipulated as those:

(a) who, at a workplace, use the plant, substance or structure for a purpose for which it was designed;
(b) who handle the substance at a workplace;
(c) who store the plant or substance at a workplace;
(d) who construct the structure at a workplace;
(e) who carry out any reasonably foreseeable activity at a workplace in relation to the manufacture (in

the case of the PCBU being the designer), assembly or use of the plant/substance/structure for which it was designed, or the proper handling, storage, decommissioning, dismantling or disposal of the plant/substance/structure; or

(f) who are at or in the vicinity of a workplace and who are exposed to the plant, substance or structure at the workplace or whose health or safety may be affected by a use or activity referred to in (a)–(e).

Examples of reasonably foreseeable activities in reference to (e) would include inspection, operation, cleaning, maintenance or repair of plant.

This comprehensive list not only captures those persons who would typically be considered "workers", but also the general public within the vicinity of the workplace where these activities are being conducted.

The impact of this to a design organisation means that the organisation must have a formal hazard identification, risk assessment and risk control process associated with a design for plant, substance or structure that takes into account the entire lifecycle of the system (with all of the supporting elements) and the associated persons who use the plant, substance or structure for its primary intended purpose as well as in carrying out other reasonably foreseeable activities related to the intended purpose. Additionally, the risks that are associated with the plant, substance or structure must be eliminated, or if not able to be eliminated, must be reduced so far as is reasonably practicable (**SFAIRP**).

Analysis of risk and provision of information

The remainder of these additional duties, as detailed in s 22(3)–(5) of the Act outline further matters that a designer must do in relation to the analysis of risk and the provision of information.

Section 22(3) states that **the designer must carry out, or arrange the carrying out of, any calculations, analysis, testing or examination** that may be necessary for the performance of the duty imposed by s 22(2), ie the duty to design the plant/substance/structure without risks to the health and safety of persons. It is noted that the same obligation would be incumbent on a manufacturer; however, a PCBU that is an importer or supplier would only need to ensure that the calculations, analysis, testing or examination had been carried out.

Section 22(4) states that **the designer must give adequate information to each person who is provided with the design for the purpose of giving effect to it** concerning:

(a) each purpose for which the plant, substance or structure was designed;

(b) the results of any calculations, analysis, testing or examination referred to in s 22(3), including, in relation to a substance, any hazardous properties of the substance identified by testing; and

(c) any conditions necessary to ensure that the plant, substance or structure is without risks to health and safety when used for a purpose for which it was designed, or when carrying out any activity referred to in s 22(2)(a)–(e).

Section 22(5) states that the designer, on request, must, so far as is reasonably practicable, give current relevant information on the matters referred to in s 22(4) to a person who carries out, or is to carry out, any of the activities referred to in s 22(2)(a)–(e).

The Explanatory Memorandum of the Act explains that the duty to provide current relevant information is based on what the designer knows, or ought reasonably to know, at the time of the request in relation to their original design. If another person modifies or changes the original design of the plant or structure, this person then has the responsibility of providing information in relation to the redesign or modification, not the original designer.

The impact of this for a design organisation is that the hazard identification, risk assessment and risk control activities that are conducted (to control the risk to the persons who use the plant, substance or structure for its primary intended purpose as well as in carrying out other reasonably foreseeable activities related to the intended purpose) must be documented in a manner that allows the organisation to provide the information detailed in s 22(4) to each person to whom the plant is provided and, if requested, to any of the persons identified in s 22(2)(a)–(e).

It should be noted that there might be impacts on a company under s 22(5) where limited information (design or safety) is available for a plant, substance or structure where a company acts as a manufacturer, importer or supplier of that plant, substance or structure. A company must actively ensure that the provision of information requirements of s 22(4) are captured as part of the design approval process.

Codes of practice

There are two model codes of practice that are particularly relevant to a design organisation. These are the *Safe Design, Manufacture, Import and Supply of Plant*[2] and the *Safe Design of Structures*.[3] The model codes of practice have been developed by Safe Work Australia for adoption by the Commonwealth, state and territory governments. As such, a model code of practice must be approved as a code of practice within a jurisdiction[4] to have legal effect.

Section 275 of the Act states that in proceedings for an offence against the WHS Act:

- an approved code of practice is admissible in the proceeding as evidence of whether or not a duty or obligation under the Act has been complied with;
- a code of practice may be regarded as evidence of what is known about a hazard or risk, risk assessment or risk control to which the code relates; and
- a code of practice may be relied on in determining what is reasonably practicable in the circumstances to which the code relates.

There are four areas of note in the foreword to the model codes of practice:

1. a code of practice applies to anyone who has a duty of care in the circumstances described in the code;
2. in most cases, following an approved code of practice would achieve compliance with the health and safety duties in the WHS Act, in relation to the subject matter of the code;
3. like regulations, codes of practice deal with particular issues and do not cover all hazards or risks which may arise. The health and safety duties require duty holders to consider all risks associated with work, not only those for which regulations and codes of practice exist; and
4. compliance with the WHS Act and Regulations may be achieved by following another method, such as a technical or an industry standard, if it provides an equivalent or higher standard of work health and safety than the code.

While the codes of practice are intended as practical guidance to achieving the requirements under the WHS Act and Regulations, the consequence of s 275 of the Act implies that the codes of practice represent minimum requirements for anyone who has a duty of care related to the circumstances described in the codes. However, evidence of compliance with the Act and Regulations in a manner that is different from the relevant code of practice, must provide a standard of work health and safety that is equivalent to or higher than the standard required in the code.

The impact of this for a design organisation is that where there are codes of practice that are relevant to an organisation's business or undertaking, these should be regarded as a minimum requirement. However, it is considered that compliance to codes of practice, in and of itself, does not necessarily ensure a SFAIRP argument for reduction of risk (ie, that the risks have been reduced so far as is reasonably practicable).

Safe Design, Manufacture, Import and Supply of Plant

The draft model Code of Practice, *Safe Design, Manufacture, Import and Supply of Plant*, provides practical guidance on how to meet the additional requirements under the WHS Act and Regulations for the organisation that designs, redesigns or modifies plant. Plant is defined in the code as machinery, equipment, appliances, containers, implements and tools, and components or anything fitted or connected to those things. Plant includes lifts, cranes, computers, machinery, scaffolding components, conveyors, forklifts, vehicles, power tools and amusement devices.

Safety in design

The code provides practical ways to meet the requirements described above under *PCBUs that Design Plant, Substances or Structures*. The code also provides guidance relating to the role of the designer and safety in design. For a design organisation, safe design begins at the concept development phase, whereby hazards can be eliminated through the design process or risk control measures can be accommodated within the design concept and functional requirements.

The designer must consider safe design across the lifecycle of the plant. This will entail identifying potential hazards, assessing risk and applying suitable risk controls for the lifecycle phases such as manufacture, transport, installation, commissioning, operation/use, maintenance/repair, decommissioning, and disposal.

Two other areas of note for the design organisation within the code of practice are reasonably foreseeable misuse and minimising human error. The designer should understand reasonably foreseeable use of the plant for applications other than those for which it was designed and originally intended. Examples given are where an excavator is used to lift and transport concrete pipes or a front end loader is used as a crane. Similarly, human error considerations in design include the propensity of users bypassing/removing a guard for extra speed or increased production, or human error due to repetition, boredom, or poor plant design. The designers should be aware of factors inherent in their design that contribute to human error.

Resources

The impact of this to a design organisation is that there are a range of skills and knowledge that will need to be drawn upon to achieve the requirements of the WHS Act and Regulations for PCBUs that design plant. This knowledge and capability, as detailed in the code of practice, includes:

- knowledge of the WHS Act and Regulations, codes of practice and other regulatory requirements;
- understanding the intended use of the plant throughout its lifecycle;
- knowledge of hazard identification, risk assessment and control methods;
- knowledge of technical design standards;
- the ability to find and apply relevant data on human dimensions, capacities and behaviours and using relevant expertise where required; and
- knowledge of the environment where the plant is to be used and possible impact on the plant's operation.

Provision of information

The other key area supporting safe design activities is the documentation and provision of information to the stakeholders in s 22(2) of the Act. The code provides examples of the type of information to be provided, including:

- the installing, commissioning, using, handling, storing, decommissioning and dismantling the plant;
- hazards and risks associated with using the plant;
- testing or inspections to be carried out;
- systems of work and competency of users necessary for the plant to be used safely; and
- emergency procedures if there is a malfunction.

Safe Design of Structures

The model code of practice, *Safe Design of Structures*, provides practical guidance on how to meet the additional requirements under the WHS Act and Regulations for an organisation that designs structures that will be used, or could reasonably be expected to be used, as a workplace. The code states that this includes architects, building designers and engineers, and that the code is also relevant for anyone making decisions that influence the design outcome, such as clients, developers and builders.

The Act defines structures as anything that is constructed, whether fixed or moveable, temporary or permanent, and includes:

- buildings, masts, towers, framework, pipelines, roads, bridges, rail infrastructure and underground works (shafts or tunnels);
- any component of a structure; and
- part of a structure.

Designer as the duty holder

The code provides comprehensive examples of duty holders for design of structures, including interior designers, town planners, landscape architects, building service engineers, temporary works engineers and persons who specify how structural alteration, demolition or dismantling work is to be carried out.

A critical aspect of this code for a design organisation is that a designer who alters or modifies a design without consulting the original or subsequent designer will assume the duties of a designer. As such, this designer will have to take on the duties to consider the impact of the overall structure on the health and safety of those who work on or use the structure.

Concurrent duty holders

The code recognises that there may be concurrent or overlapping duties and that it will not always be possible to clearly delineate who has responsibility, and in which circumstances, for the elimination or minimisation of hazards associated with the structure. The Act is clear in that duties of care cannot be transferred to another person and that more than one person can concurrently have the same duty. The Act (s 16) states that:

> Where more than one person has a duty for the same matter, each person retains responsibility for their duty and must discharge it to the extent to which the person has the capacity to influence or control the matter or would have had that capacity but for an agreement or arrangement claiming to limit or remove that capacity.

Practically, this means that although the design organisation may have management control over an activity, they can nevertheless meet their obligations through other means such as consultation, cooperating and/or coordinating activities with concurrent duty holders who have direct control over the activity.

Safety in design

This code also provides considerable guidance on safety in design to a designer of structures. Similar to the code for safe design of plant described above, safe design considerations for structures include a formal risk management approach, requisite knowledge and capability, and the full lifecycle of the structure. The code states that the test of what is reasonably practicable in relation to a designer's duty to ensure health and safety of those who work on or use the structure, will be based on the prevailing standards of design and the hazards and risks known at the time of the design of the structure.

Provision of information

Similarly to the designer of plant, the designer of structures must provide information about identified hazards, assessment of risk and control of risk during the design phase for those downstream organisations involved in the subsequent phases of the lifecycle of the structure.

The code points out that communicating this information to other duty holders will make them aware of any residual risks and minimise the likelihood of safety features incorporated into the design being altered or removed by those engaged in subsequent work on or around the building or structure.

Regulations for plant and structures

The WHS Regulations expand on the specific new WHS obligations that have now been imposed on a design organisation. There are a couple of key points for design organisations that warrant mention.

The Regulations detail the regulatory requirements for designers of plant and structures in Ch 5, Plant and Structures. The Regulations reiterate the requirements of the Act and include many other prescriptive requirements such as additional control measures and registration of plant designs. Requirements related to records and information for registered plant are more stringent. For example, a designer of plant must keep the records made under regs 228 and 229 for the design life of the plant.

Chapter 6 of the Regulations addresses construction work, and there are elements of this chapter that are relevant to designers of structures. This is mainly in the area of overlapping duties of care of the designer of the structure and the person who commissions the construction work. Of significance to the design organisation, is the requirement under reg 295 that the designer of a structure or any part of a structure must give the commissioning organisation a safety report. This safety report is a written report that specifies the hazards relating to the design of the structure that:

- create a risk to the health and safety of persons undertaking the construction work; and
- are unique with this particular design and not with other designs of the same type of structure.

Officer due diligence

Officers, such as company directors, have a duty to exercise due diligence to ensure the business or undertaking complies with the WHS Act and Regulations. This includes taking reasonable steps to ensure the business or undertaking has and uses appropriate resources and processes to eliminate or minimise risks from the design of plant and structures.

Section 27(5) of the Act contains a non-exhaustive list of steps an officer must take to discharge their duties, including acquiring and keeping up-to-date knowledge of WHS matters and ensuring the PCBU has, and implements, processes for complying with any duty or obligation the PCBU has under the Act.

The positive duty of care required of the officer of the PCBU to exercise due diligence includes taking reasonable steps to:

(a) acquire and keep up-to date knowledge of work health and safety matters;
(b) gain an understanding of the nature of the operations of the business or undertaking of the PCBU and generally of the hazards and risks associated with those operations;
(c) ensure that the PCBU has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to health and safety from work carried out as part of the conduct of the business or undertaking;
(d) ensure that the PCBU has appropriate processes for receiving and considering information regarding incidents, hazards and risks and responding in a timely way to that information;
(e) ensure that the PCBU has, and implements, processes for complying with any duty or obligation of the PCBU under this *Act*; and
(f) verify the provision and use of the resources and processes referred to in (c)–(e).

The Explanatory Memorandum of the Act explains that what is required of an officer should be directly related to the influential nature of their position. This is because the officer governs the PCBU and makes decisions for management. A high standard requires persistent examination and care, to ensure that the resources and systems of the PCBU are adequate to comply with the duty of care required by the PCBU. This also requires ensuring that they are performing effectively. Where the officer relies on the expertise of a manager or other person, then that expertise must be verified and the reliance must be reasonable. This will need to be considered in the light of the competencies of individuals.

The impact of this to a design organisation is considered to be significant in that the positive duty of care provision will apply to the members of the board and senior executives. These officers need to understand the organisation's business and undertakings and its risks, and need to be actively engaged in safety in design.

The implication of this for a design organisation is that there is a much greater obligation on the officer to understand the impact of decisions. By not doing enough, an officer can be liable of an offence, even if the organisation is seen to be compliant with the Act and there wasn't a defined breach. This could extend to anything from technical issues to competencies of staff. It may become increasingly important to ensure that the level of competency is satisfactory for the undertakings of the organisation.

Conclusion

The above overview of the obligations on designers of plant and structures under the harmonised WHS Act, the Regulations and codes of practice highlights significant new statutory obligations that need to be complied with. These will have ramifications for both the internal operations of a design organisation, and for its external interfaces with its clients and other organisations who have a legitimate interest in the provision of relevant information.

The new statutory obligations will require a design organisation to develop a strategy to ensure that its designs are compliant with the WHS Act and the Regulations. This will involve the preparation of appropriate procedures and processes, ongoing monitoring to ensure that they are complied with, and documentation to provide evidence of compliance. Such a program will require resources and therefore a significant investment in understanding the new requirements, and subsequent documentation and training of staff.

Perhaps the greater challenge for a design organisation will be to ensure that its clients understand the new WHS obligations that designers must comply with, and that these may involve an increase in the scope and cost of the designer's work. Furthermore, the requirement for a designer to provide relevant information to relevant parties, and to discuss the design in relation to subsequent modifications may have financial consequences for a designer long after the design contract has been concluded. These are issues that a design organisation will need to consider in entering into future design contracts.

The increasing emphasis on WHS in the community, and the central position it now has in the execution of every major project, may ultimately require that design organisations obtain independent certification of their WHS compliance, in a similar way that ISO9000 compliance is now mandatory on most major projects.

In the authors' view, the provision of adequate resources to ensure that a design organisation complies with its statutory WHS obligations in relation to its work product (ie, designs) will be an ongoing management challenge. The journey will start with an understanding of the new harmonised WHS regime in Australia.

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Footnotes

1. C Holland & Dr D Charrett, "WHS in Australia — the current state of play" (2013) 25(3) Australian Construction Law Bulletin 46.
2. *Safe Design, Manufacture, Import and Supply of Plant*, Draft Model Code of Practice, released for public consultation on 2 April 2012. This DRAFT Code has been approved by Safe Work Australia Members and is ready for approval by the Select Council on Workplace Relations (Ministerial Council). This Code will become a model WHS Code of Practice under the Inter-Governmental Agreement for Regulatory and Operational reform in OHS when it is approved by the Ministerial Council.
3. *Safe Design of Structures*, Model Code of Practice, 24/07/2012.
4. The Safe Work Australia website provides links to the relevant WHS regulators for the states and territories: www.safeworkaustralia.gov.au, last accessed 4 August 2013.