

BUILDING DESIGNERS AND OWNERS – HOW THE REGULATIONS AFFECT YOU

The Occupational Health, Safety and Welfare (OHSW) Regulations 1995 (SA) affect those who are:

- employers
- employees
- manufacturers, importers and suppliers of plant or substances
- designers
- building owners or occupiers
- owners, installers or erectors of plant
- self-employed.

Division 1.2 of the regulations describes the responsibilities of people who may influence health and safety at work. Schedules 1 and 2 provide summary tables of responsibilities for the implementation of each regulation.

The regulations encourage a proactive approach to controlling risks and require designers and owners of buildings that are used as workplaces to play their part in protecting health and safety. Using a life cycle risk management process at the design stage will improve the inherent safety of a building.

The OHSW regulations are designed to be consistent with the provisions of the Building Code of Australia (BCA). Although a building design may meet the requirements of the BCA, there are still many design options and choices the designer or owner can make to improve the INHERENT safety of the building.

WHAT IS THE ROLE OF THE BUILDING DESIGNER?

The 'building designer' is the person who designs buildings (or parts of buildings), or who is responsible for the design of a building.

The designer's duty is to ensure that a building is designed so that people, who might work in, on or about a building used as a workplace, are safe from injury and risks to health by:

- reviewing the design to identify hazards that might occur across the life cycle of the building
- assessing the risk from those hazards and, where practicable, redesigning building elements to eliminate or minimise the risk
- providing information about an identified risk to the owner when it cannot be eliminated.

See Schedule 2 for a list of designers' responsibilities.

WHAT IS THE ROLE OF THE BUILDING OWNER?

The 'building owner' is the person who has right of title to, and management of or control over, the building and includes a developer or other person who manages or controls the building as an agent of the owner.

The owner of a building that comprises or includes a workplace must ensure that the health and safety risks associated with the building, and any fixtures or fittings within the building that are under their control, are eliminated or controlled so that people who might work in, on or about the building are safe.

See Schedule 1 for a list of building owners' responsibilities.

For proposed buildings, the owner's role is to ensure that the designer fulfills their role and provides a documented register of any risks that could not be eliminated.

The owner or developer must then pass the risk information on to those involved with the building throughout its life cycle.

HOW CAN OWNERS AND DESIGNERS COMPLY WITH THE REGULATIONS?

People may be injured when a building is being constructed, occupied or maintained. It is more effective, less costly, and easier to eliminate risks at the design stage than later in a building's life cycle.

Building designers and owners must ensure a safe workplace by:

- identifying hazards over which they have control
- assessing risks to anyone associated with the building over its life cycle
- eliminating where practicable, or minimising, risks
- consulting with those affected by hazards
- providing information about any remaining risks.

A compliance process for designers

Designers can comply with their OHS responsibilities for design safety by following the six steps of the SAFE DESIGN process:

Step 1. Include risk management processes as a part of the project.

Step 2. The design team leader ensures that all the skills necessary for the risk management process are available.

Step 3. Collate health and safety risk information associated with the building.

Step 4. Review the design to identify health and safety risks, and redesign options.

Step 5. Record the details of any risk that could not be eliminated and provide this residual risk information to the owner as part of the project documentation.

Step 6. Assist the owner to review the residual risk information at post-construction and/or post-occupancy reviews.

A compliance process for building owners

Building owners have responsibilities for proposed new buildings and for any existing building they may own.

Investing more time and resources in a building's design and its review, will not only improve health and safety, but will also lead to significant improvement in business efficiency and sustainability within the building.

For proposed (new) buildings

Proposed building owners can comply with their OHS responsibilities by initiating and being involved in the Safe Design process:

- **Initiate the process at STEP 1** by including design review and development of the residual risk document in designers' engagement briefs.
- **Assist the designer to identify hazards at STEP 3** by providing information about the proposed industry activities, business size etc that will occupy the building.
- **Take part in STEP 4**, during design review, on decisions about risks that are under an owner's control. Owners should be aware of their possible increase in liability through not accepting a change.
- **Following STEP 5**, use the residual risk document to inform people involved at each life cycle stage of the building about the risks they may encounter. Risk control strategies can be implemented by including risk information in procurement processes and documents, and requiring prospective contractors to outline their proposed mitigation strategies in tender documents.

Examples:

- Residual risks that might be present during the construction phase should be detailed in the construction contract documentation. Prospective building contractors should be required to identify proposed risk control methods in their construction safety plan, and submit those with their tender documentation.
- Specific materials, unusual work processes or equipment necessary for the construction or as part of a safety solution identified in the design review, should be included on drawings and/or in the specifications and purchase requisitions.
- Any special access requirements for say, maintenance of a building's air conditioning should be clarified in the contract specification, and solutions proposed as part of tenders.

- **Provide occupiers and building maintenance contractors with risk information** relevant to their operations and occupancy.
- **Involve the designer in post-construction and/or post-occupancy reviews at STEP 6.** Include builder and designer participation in reviews and an occupier's lease in their contracts. Use the outcomes from the reviews to update the residual risk document, and pass new information on to the designer and builder for their future reference.

For existing buildings

Owners must manage risks associated with any building they own. For **existing buildings** this means making sure risks are eliminated or minimised, residual risk information is collated and made available to occupants, contractors and suppliers associated with the building, by:

- developing a risk register. A risk management consultant could assist, by providing guidance for developing risk management strategies
- eliminating or minimising risks of identified hazards in a planned way, ensuring that others involved with the building (including contractors engaged for building renovation, extension or demolition) are made aware of the risks they face and develop controls for their risks
- reviewing the risk register periodically
- providing risk information to the new owner if a building is sold.

Examples of common building-related hazards with solutions

HAZARD	SOLUTION EXAMPLES
<p>Exposure to falls: from working at heights, on the same level or injury from falling objects.</p>	<ul style="list-style-type: none"> • Structural steel connections with extra perforations for temporary fixing during erection can increase stability and reduce risks of falls and falling objects. • Handling systems for erecting columns can be designed so that slings are disconnected from ground level. • Design building elements to be assembled at ground level and then lifted in to position. • Column designs could include a perforation 950 mm above floor level for immediately fixing handrails. • Use pre-fabricated permanent stairways for immediate installation - no need to build and use temporary access. • Use prefabricated concrete panels, columns, beams etc to minimise manual handling of formwork, reinforcing steel and concrete in construction, reduce exposure to falls from heights, and minimise temporary access scaffolding. • Group floor penetrations in one area and infill with porous concrete block work to minimise trips and falls. • Design roof parapets 950mm high to act as a permanent guardrail. • Design tops of guardrails for 'no storage' to minimise risk of objects falling. • Design building external maintenance operations to be done from ground level or from integrated gangways. • Provide anchorage points for building maintenance work and edge protection. • Consider safe access for maintenance of lighting in stairwells.
<p>Exposure to electricity</p>	<ul style="list-style-type: none"> • Bury overhead power lines at the start of construction to minimise the risk of contact. • Design permanent electrical distribution systems so that they can be installed and used as early as possible in construction, to reduce the need for temporary supplies or trailing cables. • Design easy access for maintenance of electrical systems, and minimise the use of extension power cables.
<p>Movement of people and materials</p>	<ul style="list-style-type: none"> • Designing floors to be even, with no steps or sudden level changes will maximise the use of trolleys and mechanical aids to move materials around the workplace. • Separate pedestrian and vehicle traffic, (especially forklifts). • Include adequate and accessible storage areas for stock, trolleys, pallets and lifting aids, for both current and planned future needs. • Consider the long-term slip resistance of floor coverings, the location of changes in type of covering and location of joints. • Plan and design for traffic control: parking, passing, loading etc. • Allow adequate room for comfortable access to plant and equipment for installation, maintenance and exchange. • Plan for adequate waste collection, storage and removal. • Design main entrances, ground floors, and service lifts etc for comfortable access by emergency services.

HAZARD	SOLUTION EXAMPLES
Exposure to chemicals	<ul style="list-style-type: none"> Select materials (adhesives, paints, coatings soft furnishings etc) that are free of, or low in volatile organic compounds.
	<ul style="list-style-type: none"> Consider mechanical jointing and fixing systems for interior linings, ducts and pipe work to minimise the use of volatile solvent-based adhesives.
	<ul style="list-style-type: none"> Consider business activities and materials in the design of ventilation and extraction systems to eliminate exposure to irritant dusts and fumes.
Precinct safety	<ul style="list-style-type: none"> Do a crime risk assessment with the local council or police.
	<ul style="list-style-type: none"> Design for easy surveillance, control of access, reinforced territory and good space management.
	<ul style="list-style-type: none"> Design external precincts for clear vision to reduce crime / assault / break-ins.
	<ul style="list-style-type: none"> Design for protection from vandalism, fire in waste bins, rubbish or pallet stacks.

FURTHER INFORMATION AND ADVICE

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