

SAFETY IN DESIGN REVIEW:

INFORMATION FOR CONSULTANTS

The construction industry is committed to ensuring that safety in design is an integral part of the design and construction process.

Under WHS legislation (Section 22), designers are required to identify hazards and implement controls during the design phase of construction projects. The objective is to consider the safety of those who construct, maintain, clean, repair and demolish a structure at the design stage when potential hazards can be eliminated. It is also an opportunity to explore issues of concern to end users and for public access.



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A common approach to safety in design includes:

1. Conducting CHAIR workshops on critical aspects of the design
2. Distribution of minutes including actions, responsibilities and issues
3. Reporting of measures and closure of issues identified

The CHAIR process involves three stages of reviews:

CHAIR 1: Conceptual design review

The aim of this workshop is to have a broad review of the hazards that should be considered at the conceptual design stage of a project. It is anticipated that the client may have some safety criteria to be met, lessons learnt from past projects or design requirements to improve the amenity of the final structure. For example, preferred roof access, materials handling requirements, elimination of confined spaces etc. There also may be some particular requirements of the site, adjacent utilities or structures or particular stakeholder demands which must be met in the design.

CHAIR 2: Detailed design construction or demolition review

The focus of these workshops are on the construction sequence divided into logical steps for analysis. Aim is to identify design modifications that would result in safer construction or demolition techniques by eliminating or substituting a dangerous construction or demolition step or the main causes of accidents.

CHAIR 3: Detailed design maintenance

The purpose of CHAIR 3 is to stimulate discussion on improving the maintenance and repair of the proposed design when it is in the operating phase. This is also an opportunity to reconsider the needs of those who will work within or visit the structure and thus improve their work safety, productivity, access and amenity.

Preparing for the CHAIR workshops

To ensure that workshops facilitate client engagement and provide valuable information to the design team, it is important to be well prepared and to consider the following:

- Provide clear drawings and renderings to aid discussion
- Be aware of WHS regulation and relevant Code of Practice requirements as well as relevant Australian Standards applicable to the design.

- Identify what aspect of the plant / structure requires regular maintenance
- Size / weight of components which may need replacement
- Materials handling strategy for components and products
- Height access strategy for work over 2m
- Safe access strategy for confined spaces
- Servicing requirements for plant / installations
- Emergency procedures for plant failure

References:

NSW Work Health and Safety Act 2011, Section 22- duties of persons conducting business or undertakings that design plant, substances or structures

<http://www.legislation.nsw.gov.au/inforce/f8df8095-a335-66a0-8828-f33d06042cb9/2011-10.pdf>

NSW Work Health and Safety Regulation 2011

<http://www.legislation.nsw.gov.au/inforce/3fd72031-0a09-4c16-934f-8c80fd843666/2011-674.pdf>

In particular, note:

Chapter 4: Hazardous work

- Noise
- Hazardous manual tasks
- Confined spaces
- Falls
- High risk work (Licencing)
- Abrasive blasting
- Electrical work
- Diving work

Chapter 5: Plant and Structures

Chapter 6: Construction work

Codes of Practice www.safeworkaustralia.gov.au

- Safe design of structures
- How to manage workplace health and safety risk
- Hazardous manual task
- Confined spaces
- Managing the risk of falls at workplaces
- Excavation work
- Demolition work

Guides

- Guide to Importing & Supplying Plant
- Guide to Safe Design Plant
- Guide to Manufacturing Safe Plant

CHAIR tool (WorkCover NSW) is available from OHS Solutions on request.