

WHS Unit

WHS RISK MANAGEMENT FOR THE DESIGN OF BUILDINGS AND STRUCTURES

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1 Introduction

The University of Wollongong is committed to providing a safe and healthy workplace for all staff, visitors, contractors and students. To meet this commitment, the University shall endeavour to control any risk to workplace health and safety by identifying potential hazards, assessing the risk of the hazard, and implementing corrective measures which aim to control hazards at their source.

The purpose of this guideline is to ensure that a systematic process detailing the requirement for design consultants to manage WHS risk during the design of a building or structure is defined and available. It is expected that any outside organisation procured by the University to assist with the design a building or structure, such as a design consultant, will comply with the requirements set out in this guideline. The University Project Manager coordinating the overall construction project is responsible for ensuring any outside organisations are aware and understand the expectations set out in this guideline.

2 Scope

This guideline applies to the design and construction of all University infrastructure including buildings, structures, roads, electrical services etc.

3 Definitions

<i>Contractor</i>	A person or organisation engaged to carry out work for the University.
<i>Design Consultant</i>	A person or organisation contracted by the University to develop design specifications for a building or structure.
<i>Project Manager</i>	Is the UOW officer or person nominated to oversee and coordinate a project.

4 Risk Management in Design

A risk management approach incorporating the process of identification, risk assessment and control is required to be undertaken during the design of a building or structure. This ensures the ongoing safety to general users and members of the public that will access the facility once it has been constructed. The following details the risk management approach that should be incorporated during the design of buildings and structures.

4.1 Identifying Hazards

Any hazards identified during the design stage of a building or structure need to be identified and recorded by the responsible party for making decisions on the design. Generally a consultant will be contracted to provide specifications that the builder will use during construction. For the overall design of a building or structure the Project Manager will typically engage a variety of consultants to coordinate specifications.

4.2 Assessing Risk

Assessment of risks occurs after hazards have been identified during the design stage of the building or structure. Making a judgement on the level of risk involves assessing the consequence if a hazard was to develop into an incident as well as the likelihood of that development occurring.

4.3 Implementing Controls

The primary aim of risk control is to eliminate the risk by removing the hazard. When this is not possible the risk must be minimised using one or more of the options from the hierarchy of controls. The risk control measure selected must be the highest possible option in the hierarchy to minimise the risk to the lowest level that is reasonably practicable.

For more information on risk management visit the University's [Risk Management Guidelines](#).

5 WHS Design Risk Register

The WHS Unit has developed a WHS Design Risk Register to assist Project Managers and design consultants to document risk management activities. It is expected that the Project Manager will oversee this process and regularly review the progress of risk control activities with the design consultants where applicable.

5.1 Engaging a Design Consultant

Where a design consultant is required, the Project Manager should first inform the design consultant on the University's expectation to document risk management activities during design, as outlined in this guideline, when they formally engage their services. This is typically completed during the letter of request for services.

The following requirements are expected to be established during engagement:

- read and understand the requirements set out in this guideline
- document and assess the risk of any identified hazards
- document suitable control measures.

The risk assessment may be documented using the Risk Register in Appendix 1: WHS Design Risk Register or alternatively reference and provide a report outlining the hazards, risk and control measures.

5.2 Competency of Design Consultant

It is important to ensure that the design consultant has the appropriate skills and qualifications to identify all of the hazards and risks associated with the project. Design consultants are required to verify or 'sign-off' the health and safety requirements of the project and supply this to the Project Manager in writing, as in Appendix 1: WHS Design Risk Register.

Design personnel will, as a minimum, have been trained and assessed as competent to perform risk management processes and have relevant industry safety knowledge and experience applicable to the design. Competency of design consultants can be demonstrated by qualifications e.g. mechanical engineer, or skills or experience e.g. completion of previous projects and an understanding of the risks involved e.g. radiation safety consultant.

Design consultants are required to document their level or competency and expertise on the Design Risk Register or alternatively providing other supporting documentation, such as a letter, outlining this information.

At completion of the Design Risk Register the Project officer is to obtain a signed design risk register or other approved document from the consultant.

5.3 Completion of WHS Design Risk Register

The Project Manager is to provide the Design Consultant with a copy of this guideline as well as the Design Risk Register at the commencement of design work. It is the Project Manager's responsibility and up to their discretion to manage the final version of the WHS Design Risk Register.

Larger projects will require multiple Design Consultants and more than one WHS Design Risk Register will be completed.

Small projects may only require the Project Manager completing the WHS Design Risk Register or engaging a small number of Design Consultants.

5.4 Verification

Verification of health and safety requirements and risk controls is required to ensure that the design meets the requirements. This is to be completed by a competent person for the applicable. A competent person is considered to be someone with appropriate qualifications, licences, experience or knowledge in the field of expertise being assessed.

5.5 Records

The Project Manager is to file records such as WHS Design Risk Register and Design Consultant reports in accordance with the University's Records Management Policy.

6 Related Documents

- [Risk Management Guidelines](#)

7 Version Control Table

Version Control	Release Date	Author/Reviewer	Approved By	Amendment
1	May 2011	WHS Advisor	Manager WHS	Document created
2	March 2012	WHS Advisor	Manager WHS	Rebrand
3	November 2012	WHS Advisor	Manager WHS	Update to adopt changes to design risk register.
4	March 2013	WHS Advisor	Manager WHS	No significant changes
5	October 2014	WHS Advisor	Manager WHS	Inclusion of audit requirements - qualifications, skills, experience, signature

Appendix 1: WHS Design Risk Register

Project Name:	
Consultant:	
Qualifications, skills, experience (refer clause 5.4):	
I am suitably qualified and experience preparing this risk assessment for this project and in the design of building and structures as indicated above.	
Name:	
Signature:	Date:

Hazard Identified	Risk Level	Risk Controls
Construction Site Design		
Risk associated with the construction site considering safe logistics for pedestrian and traffic movement for life of the project.	Choose an item.	
Access and Egress		
Risks associated with building access. For example egress in and out of the building as required by the BCA.	Choose an item.	
Architectural		
Risks associated with the architectural design of the building including BCA requirements. For example safe access for maintenance and safe ergonomic design.	Choose an item.	
Confined Space		
Risks relating to work in enclosed spaces. For example access to and maintenance in rainwater harvesting tanks.	Choose an item.	

Hazard Identified	Risk Level	Risk Controls
Dangerous Goods and Hazardous Chemicals		
Risks relating to the storage and handling or dangerous goods and hazardous chemicals by building users.	Choose an item.	
Demolition		
Risks relating to demolition works. For example site boundaries and logistics for site demolition of building and structures.	Choose an item.	
Drainage and Flooding		
Risks relating to drainage and flooding for general building use and access to these systems for maintenance purposes.	Choose an item.	
Electrical Maintenance Access		
Risks relating to access to electrical services for maintenance purposes.	Choose an item.	

Hazard Identified	Risk Level	Risk Controls
Environmental Management		
Risks relating to the management of environmental impacts resulting from the ongoing operation of the building. For example air emissions, liquid discharges and disposal of waste.	Choose an item.	
Fire		
Risks relating to fire and access to wet or dry fire systems for maintenance work.	Choose an item.	
Hydraulic Design		
Risks relating to the design of hydraulic operated plant and equipment including access for maintenance work.	Choose an item.	
Laboratory Layout		
Risks relating to the use of lab spaces including access for maintenance work.	Choose an item.	

Hazard Identified	Risk Level	Risk Controls
Landscape		
Risks relating to landscape design including access for maintenance work.	Choose an item.	
Lift		
Risks relating to the design of lift plant including access for maintenance.	Choose an item.	
Working at Heights		
Risks relating to the design of roof including access for maintenance.	Choose an item.	
Lighting		
Risks relating to lighting for the finished building including maintenance access. For example designing light fittings to be safely accessible for maintenance.	Choose an item.	

Hazard Identified	Risk Level	Risk Controls
Mechanical Ventilation		
Risks relating to air and ventilation systems including maintenance access.	Choose an item.	
Movement of Materials, Plant and Vehicles		
Risks related to the movement of plant and materials, and the space required for their safe movement.	Choose an item.	
Noise		
Risks relating to acoustics and excessive noise.	Choose an item.	
Structural		
Risks relating to structural aspects of design including the effect strength and stability from permanent and temporary loads borne by the structure itself.	Choose an item.	

Hazard Identified	Risk Level	Risk Controls
Pedestrian & Traffic Management		
Risks associated with the movement of pedestrian & traffic in and out of a building.	Choose an item.	
Waste Management		
Risks associated with the build up of waste including storage, disposal and removal of waste by the University and external parties.	Choose an item.	
Other		
Identify any other risk that has not been captured above.	Choose an item.	