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NEW ZEALAND
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HSW Risk Assessment – Structures Test Laboratory

For additional information refer to HS***Risk Management Procedure

Document Number: RA1	
Faculty/ Service Division: Faculty of Engineering	
School/Department: Department of Civil and Environmental Engineering	
HSW Risk: Uncontrolled Risk is High, Controlled is Moderate	
Assessment date: 08 Jun 15	
Form completed by: R.A. Powell, HSW Manager	**Signature:** **Date:**
Responsible Line Manager: Dr R. Henry	**Signature:** **Date:**
Description of activity and/or location: *Personnel Access to Structures Test Laboratory*	
Potential Hazards – Vehicles, structure collapse, confined spaces, work at height, cranes, hot work, manual handling, hydraulic equipment **Potential Harm –** Death, Strain/Sprain injuries, Shoulder injuries, Lower/Upper back injuries, Crushing Injury, Bruising, Fractures, Dislocation	

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CEE RISK ASSESSMENT 1		
Establishment: Structures Test Laboratory	**Assessment by:** R.A. Powell	**Date:** 8 Jun 15
Review Date: 8 Jun 16	**Approved by:**	**Date:**

WORK ACTIVITY
Personnel Access to Structures Test Laboratory

Reference/s
CEE Structures testing Laboratory Health and Safety Procedures

Risk Rating: (C) Consequence x (L) Likelihood = (R) Rating

Hazard / Risk	Who is at Risk?	Normal Control Measures *(Brief description and/or reference to source of information).*	Risk Rating C	L	R	Additional Control Measures Required *(To take account of local/individual circumstances).*
Unauthorised personnel may enter the laboratory	• Staff • Visitors • Students • Contractors	• Normal access for staff and student is via swipe controlled doors. • All other entrances/access points are to be either closed and locked, or blocked with expanding safety barriers. • Visitor access is to be limited to a single access/exit point. • Staff and students are to challenge people not using the visitor's access point. • Staff and students are to challenge un-inducted people who are not supervised or escorted.	4	1	4	

Hazard / Risk	Who is at Risk?	Normal Control Measures *(Brief description and/or reference to source of information).*	Risk Rating C	L	R	Additional Control Measures Required *(To take account of local/individual circumstances).*
Personnel who are unaware of hazards may place themselves at risk	• Staff • Visitors • Students • Contractors	• Visitors are to be given a visitors brief before being allowed access to the lab. • Contractors are to be given a Contractors brief, and are to sign the contractors briefing register before being allowed access to the lab. The contractor brief is valid for six months. • Staff and Students are to attend general lab induction before being able to access the lab without an escort. The general induction training is valid for twelve months.	4	1	4	Lab Manager (operations) is to be notified of groups of 4 or more at least 24 hours in advance of the visit so adequate escorts can be arranged. Additional language support is required for none English speaking visitors.
Personnel may access hazardous areas of the lab during visits.	• Staff • Visitors • Students • Contractors	• The hazard board is to be updated as soon as new hazards are introduced to the lab. • Hazardous areas are to be clearly identified and/or isolated with barriers. • Visitors are to be escorted at all times by an inducted staff member or student. • Contractors are to be briefed on where they can safely work and which areas are “no go” without an escort.	3	1	3	

Hazard / Risk	Who is at Risk?	Normal Control Measures *(Brief description and/or reference to source of information).*	Risk Rating C	L	R	Additional Control Measures Required *(To take account of local/individual circumstances).*
Personnel are exposed to hazards within the Structures Test Lab	• Staff • Visitors • Students • Contractors	• As a minimum, personnel entering the lab are to wear closed toe shoes. • Personnel without safety footwear are to stay on designated pedestrian walkways when potentially hazardous activities are taking place. • All personnel leaving designated pedestrian walkways are to wear safety shoes/boots that meet AS/NZS 2210.3 when potentially hazardous activities are taking place. • Colour coded Hard hats & Hi-Viz vests, and safety glasses & ear plugs will be available for visitors. • Staff, students and contractors are to provide and wear their own colour coded hard hats & Hi-Viz vests, and safety glasses & hearing protection. • All personnel are to follow posted Safe Work Instructions, or the verbal instructions of staff. • Designated walkways must be clear of clutter, trip hazards, slip hazards and other obstacles. • Clutter, trip hazards, slip hazards and other obstacles must be minimised within the lab as far as reasonably practicable.	2	1	2*	Additional PPE is to be worn as described in Safe Work Instructions or Risk Management Plans where required. Personnel are to be aware of vehicle/MEWP movement and other operating equipment within the lab environment. Hard-hat and hi-viz colours are assigned according to the following roles: • Lab and academic staff– *White hat & yellow vest* • Students and other inducted lab users – *Orange hat & vest* • Visitors – *Pink hat & vest* *Project specific hazards recognised and controlled to reduce the consequence to 2. This is achieved by following the project planning procedures and conducting a risk assessment as part of the Safe Work Method Statement (SWMS).

Action Plan

Management agreed additional control measures to be implemented	Resources Required	Action By			Action Complete	
		Responsible Person	Target Date	Completion Date	Responsible Line Manager Signature	Date

Review

Review Details	Comments
Scheduled Review Date	
Are all control measures in place?	
Are controls eliminating or minimising the risk?	
Are there any new problems with the risk?	
Review By: (name)	
Review Date:	

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HSW Risk Assessment Matrix

Likelihood level						
	4	**Very likely** Probably expect the event to occur in most circumstances	Moderate (4)	High (8)	Extreme (12)	Extreme (16)
	3	**Likely** Event likely to occur at least once over the coming year	Moderate (3)	High (6)	High (9)	Extreme (12)
	2	**Possible** Event may occur at some time	Low (2)	Moderate (4)	High (6)	High (8)
	1	**Unlikely** Occurrence is conceivable, but not expected to occur	Low (1)	Low (2)	Moderate (3)	Moderate (4)
			Minor	**Moderate**	**Major**	**Severe**
			1	**2**	**3**	**4**
			Consequence level			

Consequence description				
Harm to People Potential for injury or death	None or trivial / negligible injury (no or slight injury which requires localised first aid)	Minor injury (illness or injury is not serious, medical treatment required)	Serious injury (serious injury or illness, hospitalisation required)	Fatality, major injury (death, permanent disablement, or significant long-term illness)
People Affected Extent of people potentially affected	None or few (e.g. 0 to 2)	Small numbers (e.g. 3 to 10)	Moderate numbers (e.g. 10 to 50)	Wide scale (e.g. more than 50)
Reputation and Legal Potential for publicity with a negative impact on reputation / potential for legal prosecution	None or issue raised by staff or students and resolved promptly by management None or legal dispute – found not guilty – fines up to $x	Internal scrutiny to prevent escalation and short-term stakeholder concern Minor non-compliance, limited notification to regulators / affected stakeholders	Medium-term stakeholder concern, national media scrutiny and 'brand' impact Medium non-compliance, moderate notification to regulators / affected stakeholder, potential for legal	Persistent stakeholder concerns, international media scrutiny and long term 'brand' impact Significant non-compliance, extensive notification to regulators / affected stakeholders, potential for legal proceedings / imprisonment /

				proceedings / fines	fines
	Operations Extent of ability to maintain core business	None or business interruption < 4 hours None or effectiveness and efficiency of a service, programme or project impacted in the short term None or slight damage to property or equipment	Business interruption between 4 hours to 5 days Operational disruption manageable by workarounds Moderate damage to property or equipment	Business interruption > 5 days Medium operational impact resulting in delay of key deliverables Major damage to property or equipment	Business interruption of many weeks Breakdown of key activities and significant long-term impact Massive damage to property or equipment
	Environment Extent of negative impacts on the environment	None or minimal impact None or clean up expenses up to $25,000	Minor short-term or intermittent impact, able to be contained with specialist assistance Clean up expenses up between $25,000 to $1m	Serious, medium-term detrimental impact Clean up expenses up between $1m - $5m	Very serious, long-term or permanent damage Clean up expenses > $5m

Consider the Likelihood

Consider: How often is the task done? Has an accident happened before (here or at another workplace)? How long are people exposed? How effective are the control measures? Does the environment affect it (e.g. light, temperature, space)? What are people's behaviours (e.g. stress, panic, deadlines)? What people are exposed (e.g. disabled, young students, etc)?

Consider the Consequences

Consider: What type of harm could occur (minor, serious, death)? Is there anything that will influence the severity (e.g. proximity to hazard, person involved in task, etc)? How many people are exposed to the hazard? Could one failure lead to other failures? Could a small event escalate?

Calculate the Risk

The final score for each risk is calculated by multiplying the likelihood and consequences response scores. This will give a risk score of between 1 and 16.

All risks rates as "High" or "Extreme" require detailed analysis of mitigating practices / controls to determine the residual risk rating.

"Low" and "Moderate" risks may be excluded from further analysis (other than when the consequence may be severe), however the rationale for excluding these risks should be documented to demonstrate the completeness of analysis undertaken.

Other than in the most unlikely circumstance, risks that can cause major or severe harm to people have been determined as "high" or "extreme". Management review is considered appropriate for risks of these nature due to the potential magnitude of the impact, even though the likelihood may be assessed as relatively low.

Risk Priority - Legend

Extreme (12-16)	Intolerable risk. Immediate action(s) is to be taken by Faculty/Service HSW risk owners - including DVCs, Deans of Faculties, Directors of Services, Academic Heads/PIs, Services Managers. Work should not be started or continued until the risk has been reduced to as low as reasonably practicable using the hierarchy of risk controls. The Associate Director Health, Safety and Wellbeing, and Manager Risk and Performance must be advised of the risk for their review. The risk should be included in the UoA wide risk register.
High (6-9)	Should not be tolerated. Urgent action is to be taken by the immediate manager. Work should not be started or continued until the risk has been reduced to as low as reasonably practicable using the hierarchy of risk controls. The HSW Manager working with the Faculty/Service, and Manager Risk and Performance must be advised of the risk for their review. To be included in the UoA wide risk register.
Moderate (3-4)	Management to monitor risks in case changing circumstances increase the level of risk. Some action may be required, e.g. improving controls.
Low (1-2)	Requires no attention above routine practices and procedures, apart from monitoring.

Note: This proposed Health and Safety Risk Assessment Matrix aligns with WorkSafe NZ guidance, UoA Resilience Management Plan, UoA Risk Determination Matrix, UoA TVRA and UoA Incident Levels