

Physical Hazard Identification and Control Table

Owner: Health, Wellbeing and Safety

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The following table provides examples of control measures for a range of generic physical hazards. These examples are provided as a guide only and important site specific factors must also be considered. Note also that this table of examples does not include all possible hazards.

Hazard	Possible Cause	Control Measure
1. Traffic Hazards	1.1 Vehicles entering, exiting a work site	Use of traffic signalmen Installation of temporary traffic signals Use of Safety Signs Speed restriction signs displayed and enforced
	1.2 Working in close proximity to roads	Use of wickets hats or temporary barriers to cordon off sections of road Closure of road Use of Safety Signs Speed restriction signs displayed and enforced
2. Manual Handling	2.1 Handling of children or disabled people	Use of wheel chairs Use of lifting aids Imposed restrictions on certain activities Requirements for two person lifts Training of employees
	2.2 Use of heavy hand held tools eg grass slasher	Use of support harness Limits on duration of use
	2.3 Handling of heavy objects	Provide mechanical aids Redesign object or task
3. Contact with heat	3.1 Hot Materials	Provide appropriate protective clothing and training
	3.2 Fire in the Workplace	Keep workplace clear of waste materials Issue of hot work permit Remove flammable materials or store correctly Provide adequate fire fighting equipment Employee fire fighting training Eliminate ignition sources from flammable atmospheres
	3.3 Exposure to sun	Provide protective clothing and sunscreen Reduce exposure time
4. Contact with cold	4.1 Cryogenic Materials	Provide appropriate protective clothing and training
5. Contact with electricity	5.1 Faulty electric leads and tools	Tools and leads inspected and tagged
	5.2 No earth leakage detectors	Residual current devices in all circuits Residual current devices tested regularly
	5.3 Electric leads on ground	Electrical leads kept elevated and clear of work areas
	5.4 Electrical leads in damp areas	All electric leads kept dry
	5.5 Electric leads tied to metal rails	All electric leads are kept insulated
	5.6 Plant not isolated	Ensure permit to work system followed Lock-out and equipment tag procedure

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	5.7 Contact with underground or overhead cables	Location of services to be established Overhead cables to be protected Services to be isolated when working in proximity Establish safe clearance distances
6. Exposure to Noise	6.1 Plant and equipment not silenced	Fit noise suppression to noisy plant and equipment
	6.2 Not wearing appropriate protection	All personnel to wear appropriate PPE (hearing protectors)
	6.3 Excessive exposure time to noisy areas	Regulate employee exposure to noise
7. Contact with High Pressure	7.1 Burst air lines	Air hoses in good condition and regularly inspected
	7.2 Hoses becoming uncoupled	All hose couplings fitted with pins or chains
	7.3 Using compressed air to clean clothing	Prohibit and instruct employees on dangers
	7.4 Improper handling of gas cylinders	Cylinders stored upright and secured
	7.5 Defective pressure gauges	All pressure gauges inspected regularly for defects
8. Contact with Chemicals	8.1 Incorrect handling procedures	All employees trained in MSDS requirements
	8.2 Lack of information	Review Material Safety Data Sheet and assess risks
	8.3 Not wearing appropriate PPE	All personnel provided with appropriate PPE
	8.4 Incorrect storage	Hazardous substances stored and labelled correctly
	8.5 Elevated exposure levels	Provide mechanical ventilation All personnel provided with appropriate PPE
9. Contact with Radiation	9.1 Exposure to arc welding	Welding operations shielded
	9.2 Not wearing appropriate PPE	All personnel wear appropriate PPE
	9.3 Exposure during radiography operations	Correct procedures developed and followed
	9.4 Exposure to lasers	Regular equipment check Follow documented safe work procedure for laser
	9.5 Exposure to sun	Provide protective clothing and sunscreen
10. Struck Against	10.1 Protruding objects in access routes	Protruding objects are removed or marked Provide appropriate PPE (hard hat, safety boots)
	10.2 Not wearing appropriate PPE	Provide appropriate PPE & training
	10.3 Personnel running in the workplace	Personnel exercise restraint and walk
11. Struck By Object	11.1 Objects falling from work platforms	All work platforms fitted with toe-boards Fence off areas below to prevent access Materials stacked securely All personnel wear appropriate PPE (hard hats) Secure loose objects to structure
	11.2 Debris from grinding operations	Personnel wear appropriate PPE Shield grinding operations

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Hazard	Possible Cause	Control Measure
	11.3 Wind blown particles	All personnel wear appropriate PPE
	11.4 Loads slung from cranes	Loads not slung over personnel Taglines are used to prevent loads swinging Loads slung correctly
12. Fall from height	12.1 No handrails	All work platforms have secure handrails
	12.2 Working outside handrails	Persons wear full fall arrest type harness
	12.3 Floor penetrations not covered	All floor penetrations covered or barricaded
	12.4 Ladders not secured	All ladders secured to prevent movement Ladders to extend at least 1m above landings
	12.5 Unsafe area	Tag and fence to prevent access
13. Slips and Falls	13.1 Access routes obstructed by materials	All access routes kept clear of materials and debris
	13.2 Leads and hoses across access routes	All leads kept clear of ground or covered
	13.3 Slippery surfaces	All surfaces used for access kept dry and in good condition
	13.4 Safety footwear not appropriate	Personnel wear appropriate safety footwear
	13.5 Poor visibility	Provide adequate lighting
14. Caught Between, Entanglement	14.1 Operating plant	Guarding of rotating plant and hand tools Safe work procedures to be followed Provide roll over cage protection Pre-start daily safety inspection
	14.2 Moving plant	Personnel kept clear when operating plant Fit reverse alarms to plant and check operation
	14.3 Moving loads	All personnel kept clear during crane operations
	14.4 Loads tipping or swinging	Load slings properly secured
	14.5 Materials being positioned	Safe Work Procedures for moving heavy loads
15. Overstress	15.1 SWL exceeded during lifting operations	Compliance with SWL and radius charts on cranes All lifting gear checked regularly
	15.2 Sprains and strains	All personnel trained in manual handling techniques
16. Ergonomic Hazards	16.1 Poor work posture	Workstation to conform with ergonomic standards Seating to conform with ergonomic standards Training of employees Provide adequate task lighting
	16.2 Use of excessive force	Provide mechanical aids Modify workplace design
	16.3 Repetitive movements	Modify task requirements Job rotation
17. Asbestos Hazards	17.1 Accidental disturbance or contact	Asbestos materials identified and labelled Asbestos materials removed from workplace Safe work procedures developed

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Hazard	Possible Cause	Control Measure
18. Biological Hazards	18.1 Needlestick injury	Provide appropriate waste disposal containers Provide employees with PPE Develop safe work procedures and train staff
	18.2 Potential exposure to harmful organisms	Maintain and regularly test containment arrangements Develop safe work procedures and train staff Immunisation program
	18.3 Potential exposure to HIV, hepatitis	Develop safe work procedures and train staff Immunisation program
	18.4 Potential exposure to legionella bacteria	Provide employees with PPE Implement microbial control procedures
19. Excavation/ Trenching	19.1 Collapse of earth	Shoring to be provided in accordance with Code of Practice Shoring to be inspected regularly
	19.2 Fall into excavation	Provide barricades around excavation
	19.3 Asphyxiation	Provide exhaust ventilation and test atmosphere
	19.4 Inadequate access to excavation	Provide safe access by steps or ladders
20. Plant Overturn	20.1 Crane overturn	Cranes to be set up on solid ground and away from edge of excavation
	20.2 Mobile plant overturn	Plant to be fitted with roll over cage protection Safe work procedures developed
21. Suffocation	21.1 Confined spaces - lack of oxygen in pipes, tunnels, restricted spaces	Institute a permit and access system. Carry out testing. Use personal protection.
	21.2 Asphyxiation due to displacement of oxygen - processes or machines that give off heavier than air gases. Cryogenic materials	Institute standard operating procedures. Carry out awareness training Provide appropriate ventilation