

SAFE WORK METHOD STATEMENT		Operation of Vehicle Mounted Crane		
<b>Reference documents</b>	Work Health & Safety Act and Regulation's 2011, Codes of Practice; How to manage Work Health Safety Risks, Managing the risk of Chemicals in the Workplace, Hazardous Manual Tasks, First aid in the workplace, Confined spaces, Construction Work, Demolition Work, Excavation Work, Working near overhead powerlines, Managing the Risk of Falls, Managing noise preventing hearing loss,			
<b>SWI:</b>	Vehicle Mounted Crane,			
<b>Training and Competencies</b>	General construction induction card (white card), Safework certificate of competency or equivalent			
<b>Safety data Sheets</b>				
<b>Personal Protective Equipment</b>	Hearing protection, Face shield/eye protection, Safety footwear, High visibility long sleeve shirt and trousers, Sun screen, Protective gloves, Hard hat,			
<b>Plant and Equipment</b>	Vehicle mounted crane,			
<b>Inspection and Testing</b>	Pre start checks on all plant and equipment, inspection as per manufacturers requirements			
<b>Hazardous Chemicals and Dangerous Goods</b>				
<b>High Risk Work</b> <i>Indicate if any of the HIGH risk activities are performed by workers</i>	<input checked="" type="checkbox"/> Where there is a risk of a person falling more than two metres.	<input type="checkbox"/> On in or adjacent to roadways, railways, shipping lanes or other traffic corridor.	<input type="checkbox"/> In, over or adjacent to water or other liquids where there is a risk of drowning.	
	<input checked="" type="checkbox"/> At workplaces where there is any movement of powered mobile plant.	<input type="checkbox"/> Involving the use of explosives.	<input type="checkbox"/> In an area where there are artificial extremes of temperature.	
	<input type="checkbox"/> On or near energised electrical installations or services.	<input checked="" type="checkbox"/> Involving a trench or shaft if the excavated depth is more than 1.5 metres.	<input type="checkbox"/> On or near pressurised gas distribution mains or piping.	
	<input type="checkbox"/> Involves structural alterations or repairs that require temporary support to prevent collapse.	<input type="checkbox"/> Involving a confined space.	<input type="checkbox"/> On or near chemical, fuel or refrigerant lines.	
	<input type="checkbox"/> Involving tilt-up or precast concrete.	<input type="checkbox"/> On telecommunications towers.	<input type="checkbox"/> Involving diving.	
	<input type="checkbox"/> Involving removal or likely disturbance of asbestos	<input type="checkbox"/> In an area that may have a contaminated or flammable atmosphere.	<input type="checkbox"/> Involves demolition of an element of a structure that is load-bearing or otherwise related to the structural integrity of the structure.	
	<input type="checkbox"/> Involving a tunnel.			
<b>SWMS Prepared by:</b>	<b>Name and signature:</b>		<b>Date:</b>	
<b>Authorised by:</b>	<b>Name and signature:</b>		<b>Date:</b>	

**\*SWMS are to be reviewed as per the Document Control Procedure or when there has been a change to the Task / Process or Legislation.**

<b>Job Step</b>	<b>Hazard</b>	<b>Risk</b>	<b>Initial Risk Rating</b> E,H,M,L	<b>Control Measures</b> <i>Controls have been identified using the hierarchy of controls</i>	<b>Responsibility</b> <i>Who</i>	<b>Residual Risk Rating</b> E,H,M,L
Conduct a Site Specific Risk Assessment and induct staff, if necessary.	Unfamiliar worksite	- Muscle sprain - Cuts and abrasion - Broken bones	<b>M</b>	- All staff on site to complete a Site Specific Risk Assessment - Wear appropriate PPE – Traffic control vest, protective gloves, hard hat, safety boots and UV protection	Supervisor and workers	<b>L</b>
	Emergency Lack of communication	- Death or serious injury	<b>M</b>	- Emergency Response First Aid Kit - Low Voltage Rescue Kit – when applicable - Two-way radio or mobile phone - Workers trained in emergency procedures	Supervisor and workers	<b>L</b>
	Inclement weather	- Extremes of temperature	<b>M</b>	- Review weather forecasts prior to starting work - Stop work until conditions improve - Reassess site before re-commencing work	Supervisor and workers	<b>L</b>
	Uneven or slippery Ground	- Muscle sprain - Cuts and abrasion - Broken bones	<b>M</b>	- Inspect work area for appropriate foot placement and vehicle access. - Don't walk where you can't see firm surface e.g. long grass - Don't drive onto soft or slippery ground - Never work on unstable ground.	Supervisor and workers	<b>L</b>
	Overhead obstruction - overhead powerlines - trees - overhanging structure	- Electrocutation - Death or serious injury	<b>H</b>	- Be aware of obstructions take care to avoid them. - Always use an observer/spotter - Must be more than 3 m from overhead powerlines up to 132kV - Must be more than 6 m from high voltage transmission lines from 132-330kV - Must be more than 8 m from lines over 330kV - Under special circumstances, distances less than those listed above apply. These distances may be applied ONLY when the special requirements are met. - When a crane operator has the appropriate training, an observer is present, and the owner of the powerlines has been contacted, the distances can be reduced to as little as one metre.	Supervisor and workers	<b>M</b>

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<b>(Continued)</b>	Excessive Exposure to UV	- Sunburn - Skin cancer	<b>L</b>	- Wear wide brimmed hats or brim attachment, long sleeved shirt and long trousers - Sunscreen - Work in shade if possible - Plan work when UV index is lowest - Take regular breaks in shade	Supervisor and workers	<b>L</b>
	Working at heights around confined spaces	- Death or serious injury	<b>H</b>	- Use PPE e.g. harness, fall arrestor - Do not extend beyond railings - Follow confined spaces procedure	Supervisor and workers	<b>M</b>
	Inappropriate Manual Handling (chains & slings)	- Muscle sprain (limbs or torso)	<b>M</b>	- Undertake training in manual handling techniques - Task rotation, muscle stretching exercises, use correct equipment	Supervisor and workers	<b>L</b>
	Moving Traffic or Plant	- Death or serious injury	<b>H</b>	- Record TCPs as per attached SWP. - Implement approved or modified TCP - If necessary, implement VMP - Use only trained traffic controllers	Supervisor and workers	<b>M</b>
Crane pre operation check <ul style="list-style-type: none"> <li>• Crane condition</li> <li>• Crane function</li> <li>• Lifting equipment</li> <li>• Attachments</li> </ul>	Equipment Malfunction	- Muscle sprain (limbs or torso) - Cuts and abrasions - Entrapment	<b>M</b>	- The crane Pre Operation Inspection Checklist/ Log book shall be completed to determine if any defects have been reported and/or repairs carried out. - Report/ repair any defects	Competent operator	<b>L</b>
Crane set-up	Equipment Malfunction or misuse	- Muscle sprain (limbs or torso) - Cuts and abrasions - Entrapment	<b>M</b>	- The vehicle loading crane is to be positioned and set up on stable ground, or use pig-sty packing if necessary - The crane is to be positioned as close as possible to the load to be lifted. - Where possible keep the load on the uphill side. - Always apply the hand brake. - Set up the crane for lifting, stabilisers fully extended, and switch on rotating light. The crane operator is in control during any operations.	Competent operator	<b>L</b>

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Crane set-up <b>(Continued)</b>				<ul style="list-style-type: none"> <li>- The ignition key and the isolation switch (if electric powered crane) to the truck are to be removed and carried by the crane operator when he leaves the vehicle.</li> <li>- When any load shifting is to take place, no employee shall be attached to the crane, on the load, or beneath the load.</li> <li>- If crane malfunctions lower load if possible, isolate / lock out and make as safe, contact appropriate qualified personnel for repair</li> </ul>		
Crane operation <b>Controls in bold</b> to be followed by operators of Vehicle Mounted Crane less than 10 metric tonne without: <ul style="list-style-type: none"> <li>▪ CV and/or C2 Safework Certificate of Competency</li> <li>▪ Safework certificate of competency in 'dogging'</li> </ul>	Equipment Malfunction or misuse	<ul style="list-style-type: none"> <li>- Muscle sprain (limbs or torso)</li> <li>- Cuts and abrasions</li> <li>- Entrapment</li> <li>- Struck by falling object</li> </ul>	<b>H</b>	<p><b>Load is to be lifted onto the vehicle or attached trailer, then, if necessary, to the ground.</b></p> <p>The ignition key and the isolation switch (if electric powered crane) to the truck are to be removed and carried by the crane operator when he leaves the vehicle.</p> <p>When any load shifting is to take place, no worker shall be attached to the crane, on the load, or beneath the load. Crane operators must maintain a line of sight with the load at all times.</p> <p>If this is not possible, the person who guides the load must have Safework Certificate of Competency in 'dogging' and both must be familiar with signals hand and whistle.</p>	Competent operator	<b>M</b>
	Inappropriate load estimating	<ul style="list-style-type: none"> <li>- Death or serious injury</li> <li>- Crane failure</li> </ul>	<b>H</b>	Crane operators who do not have a Safework certificate of competency are not permitted to calculate or determine lifting slings/equipment required to lift/move loads. Certified operators use tables provided on lifting gear and cards provided to select lifting equipment.	Competent operator	<b>M</b>

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Crane operation <b>(Continued)</b>				<p>Make sure the extended boom and the load is within the SWL limits of the crane by referring to the load chart on crane body, BEFORE LIFTING THE LOAD</p> <p>Should the mass of the load be greater than the SWL of the crane and the truck cannot be moved closer to the load to reduce the boom length, the lift should be abandoned and a crane with a greater lifting capacity obtained</p> <p><b>IMPORTANT:</b> Ensure that when checking SWL on load chart the greater of the two distances, truck and loading point or truck and landing point, is used.</p> <p><b>The use of rated chains and slings to rated lifting points of a known load mass with a stable centre of gravity does not require ‘Slinging Techniques’</b></p> <p>A test lift should be made with a shortened boom and the load meter used to measure mass If crane malfunctions isolate and make as safe as possible, contact appropriate qualified personnel for repair.</p>		
	Load Shifting	Death or serious injury	<b>H</b>	If load shifts, immediately lower load to ground and reposition slings to balance and secure load.	Competent operator	<b>M</b>
	Night work	Death or serious injury	<b>H</b>	<ul style="list-style-type: none"> <li>- Don't work alone</li> <li>- Refer to Remote Area procedures and policies</li> <li>- Light area as well as possible</li> <li>- If lighting insufficient, do not work</li> </ul>	Supervisor and Competent operator	<b>M</b>
	Problem with lift - sinking stabiliser pads - instability of truck - excessive load movement	<ul style="list-style-type: none"> <li>- Death or serious injury</li> <li>- Crane overload</li> </ul>	<b>H</b>	<ul style="list-style-type: none"> <li>- Immediately lower the load and take necessary corrective action</li> <li>- Chock and pig-sty or relocate truck if stabiliser pads are sinking</li> <li>- Select appropriate lifting gear</li> <li>- Make certain all slings and chains are in good condition.</li> </ul>	Competent operator	<b>M</b>
Crane operation						

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<b>(Continued)</b>	- Equipment Misuse - Use in a manner other than that designed for	- Death or serious injury - Crane overload	<b>H</b>	Under no circumstances should the outrigger (stabiliser) legs be used to lift a load  Under no circumstances should the crane be used to drag the load across the ground.	Supervisor and competent operator	<b>L</b>
	- Lifting pit lids	- Death or serious injury - Crane overload	<b>H</b>	Identify weight by stamped SWL/kg if available  If any calculations are required for slinging a particular lid, a dogman is to be used to calculate the size and number of slings to be used for a particular job.  Inspect lid for cracks and lifting points for defects. A tag line attached to the lid may assist in stabilising it during slewing.  Slew load close to ground and lower to ground.  Carry out required work, at no time getting hands or fingers into pinch points between the lid and ground and the slings.  Lift and slew lid back into position and lower into place, remove lifting equipment  Erect appropriate barricades around any unfinished work that is left unattended for any period of time  If any difficulty develops, as the job progresses that can't be resolved, contact the supervisor for support.	Competent operator	<b>M</b>
Completion of work	Equipment Damage	- Muscle sprain (limbs or torso)		<b>Post operation check</b>  On completion of work all equipment is to be correctly stowed in vehicle.	Competent operator	<b>L</b>

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			<b>M</b>	<p>Also any lifting attachments which have been used must be removed from the boom if necessary and securely attached to the correct position on the vehicle.</p> <p>Any defects/problems with the equipment or work environment are to be reported to the supervisor promptly.</p> <p>Council's Workshop is to carry out repairs and scheduled maintenance required for the crane by the manufacturer or supplier of the unit.</p> <p>No modifications are to be carried out on the crane's structure or mountings (this includes transferring the crane from one chassis to another) without reference to:</p> <ul style="list-style-type: none"> <li>• The crane manufacturer for recommendations for the modifications, or;</li> <li>• Fleet Management /engineer who is competent for the class of work provides details/instructions on how the work is carried out and the section head for the crane authorises this action.</li> </ul>		
	Manual Handling (chains & slings)	- Muscle sprain (limbs or torso)	<b>M</b>	Undertake training in manual handling techniques storage of chains & slings	Supervisor and competent operator	<b>L</b>

<b>LIKELIHOOD</b> How likely is it to happen? ↓	<b>E=EXTREME H=HIGH M=MEDIUM L=LOW</b> ← CONSEQUENCES – How severely could it affect health and safety? →				
	<b>CATASTROPHIC</b> Kill or cause Permanent Disability	<b>MAJOR</b> Serious Illness or Injury	<b>MODERATE</b> Medical Attention, Time off Work	<b>MINOR</b> First Aid Required	<b>INSIGNIFICANT</b> No Injuries
	<b>ALMOST CERTAIN</b> Is expected to occur	<b>E</b>	<b>E</b>	<b>H</b>	<b>H</b>
<b>LIKELY</b> Will probably occur	<b>E</b>	<b>H</b>	<b>H</b>	<b>M</b>	<b>M</b>
<b>POSSIBLE</b> Might occur	<b>H</b>	<b>H</b>	<b>H</b>	<b>M</b>	<b>L</b>
<b>UNLIKELY</b> Could occur	<b>H</b>	<b>M</b>	<b>M</b>	<b>L</b>	<b>L</b>
<b>RARE</b> May occur only in exceptional circumstances	<b>H</b>	<b>M</b>	<b>M</b>	<b>L</b>	<b>L</b>

Risk Level	Required Action
<b>Extreme</b>	<b>Act immediately:</b> The proposed task or process activity must not proceed. Steps must be taken to lower the risk level to as low as reasonably practicable using the hierarchy of controls.
<b>High</b>	<b>Act today:</b> The proposed activity can only proceed, provided that: The risk level has been reduced to as low as reasonably practicable using the hierarchy of controls. The risk controls must include those identified in legislation, Australian Standards, Codes of Practice etc. and The document has been reviewed and approved by the supervisor and A Safe Working Procedure or Safe Work Method has been prepared and The supervisor must review and document the effectiveness of the implemented risk controls
<b>Medium</b>	<b>Act this week:</b> The proposed task or process can proceed, provided that (i) The risk level has been reduced to as low as reasonably practicable using the hierarchy of controls and The document has been reviewed and approved by the supervisor and A Safe Working Procedure or Safe Work Method has been prepared.
<b>Low</b>	<b>Act this month:</b> Managed by local documented routine procedures which must include application of the hierarchy of controls.



**Acknowledgement register**

All workers are to sign this register to indicate they have read and understood this SWMS prior to commencing work.

<b>Name</b>	<b>Signature</b>	<b>Date</b>	<b>Name</b>	<b>Signature</b>	<b>Date</b>