Safe Work Method Statement
Site Crane Lifts

HRSWMS No. 4
Revision 6

Overview

Organisation	RAR Cranes	**Contact**	Andrew Bodman
ABN	89 140 993 684	**Contact Position**	Director
Address	38 Bedford St, Queanbeyan, NSW 2620	**Contact Phone**	02 6299 6100

Project Details		**Supervisor**	Intermediate Rigger
Activity	Lifting various miscellaneous items	**Position**	Crane Operator
Resources	Crane Driver/Dogman/Rigger		

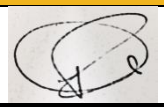
Plant	
PPE Required	

Maintenance	Every 250 hours as per manufacturers specification, Daily Pre-Start checklists
Materials Involved	Plant, Chains, slings, timber, lifting equipment, tag lines (16mm N.C)

Emergency Procedures

Plant Mechanical Failure 1. Shut down plant 2. Isolate plant 3. Notify RAR and Site Manager 4. Implement lockout for Repair	**Plant Collision/Rollover** 1. If any injuries, call 000 2. Direct emergency services to site 3. Contact First Aid – Two Way/Nurse Call/Verbal 4. Isolate the area 5. Notify RAR and Site Manager	**Refer to Critical Lift Study**

This SWMS has been developed in consultation with all RAR Employees
RAR Crane Safety Plan, Crane Compliance paperwork, Insurances and SWMS are available at www.rargroup.com.au/ohs

Sign Off	WHSE Coordinator	Contact No	Date
	Dick Garrety	0405 991 935	1.3.21

Legal Information

Legislation	
A.C.T	**N.S.W**
Work Health & Safety Act 2011 (effective 03/09/20)	Work Health and Safety Act 2011
Work Health & Safety Regulations 2011 (effective 03/08/20)	Work Health and Safety Regulations 2019
Workers Compensation Act 1951	Workers compensation Act No 70 1987
Machinery Act (1949)	Workers Compensation Regulations 2016
Machinery Regulations (1950)	
Codes of Practice	
A.C.T	**N.S.W**
Construction Work 2018	Construction Work 2019
How to Manage Work Health and Safety Risks 2020	How to Manage Work Health and Safety Risks 2019
Managing Risks of Plant in the Workplace 2020	Managing the Risks of Plant in the Workplace 2019
Hazardous Manual Tasks 2020	Hazardous Manual Tasks 2019
Work Health and Safety Consultation Cooperation Coordination 2018	Work Health and Safety Consultation Cooperation Coordination 2019
Managing Noise and Preventing Hearing Loss at Workplaces 2020	Managing Noise and Preventing Hearing Loss at Work 2019
Managing the Work Environment and Facilities 2020	Managing the Work Environment and Facilities 2019
Managing Risks of Falls at Workplaces 2020	Managing the risk of falls at workplaces 2019
National Code of Practice for Precast Tilt-Up and Concrete Elements in Building Construction 2008	
Industry Guidelines	
CICA Crane Safety Manual	
Australian Standards	
AS/NZS ISO 31000 Risk Management – 2018	**AS 3850.1** Prefabricated concrete elements-General requirements (including Amendment 1:2019)
AS 2550.1 Cranes, hoists and winches - Safe use General requirements - 2011	
AS 2550.5 Cranes, hoists and winches - Safe use Mobile cranes - 2016	
AS 3850.1 Prefabricated -General requirements (amendment 1:2019)	
AS 3775.2 Chain slings for lifting purposes - Grade T(80) and V(100) Care and use - 2014	
AS 1353.2 Flat synthetic-webbing slings Care and use – 1997 (R2014)	
AS 4497.2 Roundslings - Synthetic fibre Care and use - 2018	
AS 2741 Shackles – 2002 (R2014)	
AS/NZS 2161.1 Occupational protective gloves Selection, use and maintenance - 2016	
AS 1319 Safety signs for the occupational environment - 1994	

High Risk Activity Identification

Item No	High Risk Activity	Applies to Project?
1	Require High Risk Licence	Yes
2	Is carried out at an area in a work place in which there is any movement of powered plant	Yes
3	Involves a risk of a person falling more than 2 meters	Yes
4	Is carried out on a telecommunication Tower	No
5	Involves the demolition of an element of a structure that is load bearing or otherwise related to the physical integrity of the structure	No
6	Involves or is likely to involve the disturbance of asbestos	No
7	Involves structural alterations or repairs that require temporary support to prevent collapse	No
8	Is carried out in or near a confined space	No
9	Is carried out in or near existing residential building	Yes
10	A shaft or trench with an excavated depth of more than 1.5 meters	Yes
11	A tunnel	No
12	Involves the use of explosives	No
13	Is carried out on or near pressurized gas distribution mains or piping	No
14	Is carried out on or near chemical, fuel or refrigeration lines	No
15	Is carried out on or near energized electrical installations or services	Yes
16	Is carried out in an area that may have a contaminated or flammable atmosphere	No
17	Involves Tilt up or pre-Cast Concrete	Yes
18	Is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians.	Yes
19	Is carried out in an area in which there are artificial extremes of temperature	No
20	Is carried out in or near water or other liquid that involves a risk of drowning	No
21	Involves diving work	No

The RAR CLEAR Principles are to be used for every lift:

Communication

- Radio is working
- Whistle on person
- Clear and precise directions

Lifting gear is appropriate for the lift

- Chains/slings/Shackles etc. are rated for lift
- Chain Size, Angle Factors and Reeve Factors considered

Every load to be inspected 360 degrees before lifting.

- Check for position and bite of chains/slings and any loose items
- Come slowly up/down until the load is clear of all obstructions

Area of work is clear

Public/Other workers Vehicles and Plant Powerlines Scaffold Trees Others

Recheck under load before going above head height for any loose items

If you have any concerns about the lift STOP immediately, clear the area and bring the load back down. Find a resolution to the probl
recommencing.

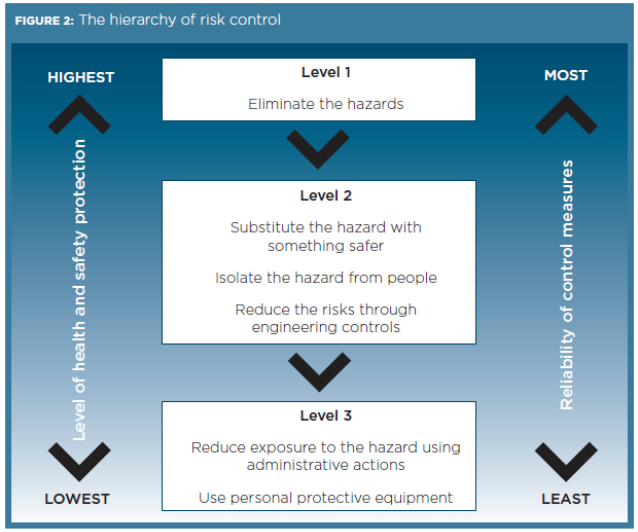
Likelihood: How likely is it to happen	Consequences: How severely can it hurt someone?			
	Minor	Moderate	Major	Extreme
Very Likely	7 Medium	11 Medium	14 High	16 High
Likely	4 Low	8 Medium	12 Medium	15 High
Unlikely	2 Low	5 Low	9 Medium	13 Medium
Very Unlikely	1 Low	3 Low	6 Low	10 Medium

Consequence Definitions	
Extreme	Single or multiple fatality, Critical incident for business, over $100,000 business loss
Major	Severe injury with some weeks off work (e.g. amputation, de-gloving, loss of eye etc), over $50,000 business loss
Moderate	Considerable injury (e.g. major cut/graze, stitches, crushed finger etc), over $10,000 business loss
Minor	Minor injury (e.g. cut finger requiring band-aid, small graze etc), minimal to no business loss

Likelihood Definitions	
Very Likely	Constant exposure to the hazard, easily foreseeable, could happen any moment, has happened on several occasions
Likely	Regular exposure to the hazard, could happen at times, has occurred before
Unlikely	Infrequent exposure to the hazard, could happen but not likely, has occurred once before somewhere
Very Unlikely	Rarely exposed to the hazard, not really expected, have never heard of it happening

Risk Treatment	
High 14 – 16	Do Not Proceed. To be reported to the Operations Director and actioned immediately to lower the risk level.
Medium 7 – 13	To be further controlled as reasonably practicable. Work can proceed with supervision and approval from the supervisor
Low 1 - 6	To be controlled as per standard works e.g. SWMS and chosen controls. Ongoing monitoring by workers / supervisors.

RISK MANAGEMENT



Risk Assessments

Item No.	Task	Hazards/Risks	Initial Risk Rating	Controls	Residual Risk Rating	Responsibility
1	Arrive on Site.	Setting up in wrong location	14	**Eliminate -** Site Foreman to be contacted before entering onto site to confirm set up location and attendance at Pre-Start Risk Assessment.	9	Crane Crew
	Complete the Pre-Start Risk Assessment and Toolbox Talk on the RAR Job Docket.	Hazards not being considered before commencing works	14	**Admin -** Site Forman and Crane crew to complete RAR Job Docket, Pre-Start Risk Assessment and Toolbox Talk. Head Contractor Site Induction to be completed by each employee when they first attend site. Plant to be Inducted Plant to site on its first visit.	9	Crane Crew / Site Foreman
	Induction.	Personnel and Plant not site compliant.	11	**Admin -** Complete Head Contractor Site Induction and Plant Compliance paperwork before commencing work.	3	Crane Crew
	Set Up Crane	Crane tipping.	14	**Admin -** Complete all steps in RAR SWMS No.1 Crane Setup/Packup.	9	Crane Crew
		Inclement weather	8	**Admin -** Monitor weather conditions. If wind speed exceeds manufacturers specifications crane operations will cease until conditions are suitable.	3	Crane Crew
	Qualifications	Crane tipping	14	**Admin -** Only Crane Operators with a valid High Risk Licence for the relevant plant are to operate crane. Only Dogman with valid High Risk Licence to sling/unsling loads and direct crane. All lifting of materials is at Dogman's discretion. **Admin** – All crane operators must have completed the crane familiarisation training including OEM	9	Crane Crew / Site Team
	Warning Devices	Crane failure	11	**Engineer -** Overload lights to be operational at all times.	5	Crane Crew / Site Team
	Crane to be locked when not attended	Crane tipping/Unqualified Operator	14	**Isolate -** Crane to be locked and key removed when set up on site and not attended to prevent unauthorised access and use.	9	Crane Crew

	Setting up on roadway	Vehicle striking plant	14	**Isolate -** Traffic Control and TTM to be in place prior to crane setting up on or near a public road by Head Contractor.	9	Crane Crew / Site Management
	Hard Hat	Injury to head from falling objects.	8	**PPE -** Crane Crew to wear hard hat at all times.	3	Crane Crew
	Gloves	Cuts and abrasions on hands while handling materials.	8	**PPE -** Gloves to be worn by RAR crew when active in crane/dogging tasks.	3	Crane Crew
2	Lifting Gear	Load falling, injury to persons, damage to property.	14	Chains & Shackles, Chains and shackles must be inspected prior to use. **Admin/Engineer** - Do not lift a load greater than the WLL of the chain or shackle. Check the grade on the tag matches the grade markings on the chain and shackle. Do not use chains, shackles, FSWR that are worn more than 10%, inspect for gouges and elongation. Inspect upper and lower terminal links for signs of wear at load bearing points and for distortion.	9	Dogman
			14	Slings. All slings must be inspected prior to use. **Admin -** Damage to label or stitching, 3 monthly tag. External wear such as abrasions, cuts or contusions. NB A nylon sling will lose more than 10% of its WWL when wet. **REFER TO CRANE LIFTING REGISTER**	9	Dogman
	Lifting Gear	Load falling, injury to persons, damage to property.	14	Lifting Attachments. Must be inspected prior to use. **Admin/Isolate** - Where loads are suspended by non- positive lifting attachments such as magnetic, vacuum or friction the working area or lifting zone must be isolated. All personal must be clear of the zone that may be affected by a falling load. Calibration test results are required for all non-positive attachments.	9	Dogman

			14	**Engineer -** All lifting of plant with fixed lifting lugs must have a compliance plate fitted prior to use. All lifting of plant with fixed lifting lugs must have a lifting chain attached to each lifting lug i.e. bins that have 4 lifting points must have 4 chains attached.	9	Dogman
3	Site Crane Lifts	Load falling, injury to persons, damage to property.	14	**Admin -** Only a dogman with a H.R license is to determine Working Load Limit (WLL) of any sling, chain, rope or lifting device to be used for lifting purpose. Only a dogman with a H.R license is to calculate loads to be lifted, slinging devices and techniques to be used. Only a dogman with a H.R license is to give visual or audible signals to the crane operator at any one time to coordinate the lifting procedure. Dual crane lifts/panel rotations will be controlled by an Intermediate Rigger.	9	Dogman
			14	**Eliminate/Admin** If the dogman or crane operator has reason to believe the lift is unsafe or dangerous the lift is not to proceed, safety concerns are to be reported to site supervisor, relevant risks are to be managed and safe conditions confirmed prior to recommencing the lift. All lifts are at the discretion of the crane crew.	9	Dogman

	Dual Crane Lifting	Crane collapse or failure causing injury/death to persons or property.	**15**	**Engineer- Refer to and follow RAR Significant Lift Study** **Engineer**- Establish total mass of load, loads lifted must be within manufacturers recommendations at all times. Dual lifts require a 20% additional safety factor (refer to lift study 1.2.18). **Admin**- A dual lift must be controlled by a person holding an **Intermediate Riggers** ticket. Best practice will utilise a separate spotter who will view the dual lift from a distance and notify crane crews of any inconsistencies' that may occur as lifting. A pre-arranged signal shall be sounded if required, calling for works to cease if safe to do so. This will be discussed at the pre-start tool box. **Isol**- Instate exclusion zone in immediate lift are, no unauthorised persons will be in the exclusion zone. The PCBU is to implement a **TTMP** if required. **Admin**- Monitor weather conditions (wind) and follow OEM recommendations, works will cease if wind speeds are exceeded if deemed safe to do so. **Admin**- Continually monitor crane movements ensuring they are slow and synchronised maintaining both hoist ropes as close to vertical as possible at all times.	**13**	Head contractor/RAR Crane crew/Dogman
	Site Crane Lifts	Falling objects causing damage or injury to persons or property.	**14**	**Admin -** Multi-level (xmas tree) lifts are not permitted.	**9**	Crane Crew

	Site Crane Lifts	Load falling, injury to persons, damage to property.	**14**	**Engineer/Admin -** No loads are to be lifted over public areas. If unavoidable then control measures are to be implemented by Head Contractor to prevent the risk of injury due to falling objects. This is to be done prior to commencing lifts. Where the movement of traffic or pedestrians has been identified as a hazard then a traffic management plan must be in place.	**9**	Dogman/Site supervisor
			14	**Engineer/Admin -** Before the load is lifted the Dogman must ensure the lifting apparatus is correctly applied and that the load is balanced and is free from obstructions. Lifting above site personnel must be avoided at all times. Dogman to notify other workers of loads to be lifted near or above them prior to commencing lift. Ensure load is under control at all times, using a tag line as required (16mm non-conductive)	**9**	Dogman
			14	**Engineer -** Brick cage to be used for the lifting of all palletised materials. Bulka bags to be placed in lifting bins at all times. When relocating Bulka Bags on work decks, do not raise bags higher than 1m above the deck.	**9**	Dogman
			14	**Engineer -** Use certified steel pallets when lifting Gyprock. Use RAR certified Gyprock bars through steel pallets. Ensure Gyprock is strapped.	**9**	Dogman
3	Site Crane Lifts	Load falling, injury to persons, damage to property.	**11**	**Isolate** - All formwork material to be landed on the deck inside the formwork leading edge exclusion zone which is installed 2m back from the plywood leading edge.	**8**	Dogman
			14	**Admin -** Loads are not to be double stacked, except in designated storage areas. **Admin -** Ensure loads are positioned correctly, surface is able to support load and is not obstructing access.	**9**	Dogman

	Site Crane Lifts	Load falling, injury to persons, damage to property.	11	**Admin/Engineer -** Do not lift overfilled rubbish bins, in windy conditions cover with a heavy material or tarp	8	Dogman
		Bulka Bags failing/falling materials.	14	**Isolate -** The lifting of Bulka Bags containing soils or other composite materials will be determined by a risk assessment and will include but not restricted to the following. **Admin -** Follow manufacturers lifting instruction, i.e. four-point lift, inspect bag for visual damage including underside prior to lifting to land point. **Isolate -** Head contractor to isolate lifting and slewing zone to prevent access by others during the lifting process. **Admin -** Bag supplier to provide an explanation of bag filling process, detailing that the bags have not" been lifted or suspended by the handles at any point, these are rated for one use only.	9	Dogman/Operator
			14	**Engineer/Admin** - Prior to lifting and loading Stressing coils on formwork decks ensure with Formwork supervisor the correct placement location (back propping instated).	9	Dogman
			11	**Admin -** Rubbish bins must have a compliance plate. Lifting lugs (4) to be used when lifting bins.	8	Crane Crew
	Site Crane Lifts	Load falling, injury to persons, damage to property.	11	**Isolate/Admin -** When lifting concrete trowelling machines ensure that blade guard is positively fixed, if not remove and lift separate. Check machine for other loose items prior to lifting.	5	Dogman
			14	**Engineer -** All items associated with formwork / scaffold / stressing must be wherever practicable strapped, if unable to secure items then place into a lifting bin or cage prior to lifting.	9	Dogman

		Falls from height	11	**Engineer/Admin** - Dogman to consider access needs for the unhooking of loads (i.e. safety screens). If a risk of falling from height is present a means of safe access is required(EWP). Notify foreman of access requirements.	8	Dogman
			14	**Admin/Isolate** - Dogman to inspect surrounds prior to lift, clear other personnel from the lift area (notify of intent to lift). As lifting monitor obstructions, ensure load is clear of obstructions and under control at all times.	9	Dogman
	Site Crane Lifts	Load falling, injury to persons, damage to property.	11	**Admin -** Dogman to estimate / calculate or seek manufacturers specifications on loads to be lifted, and determine the appropriately rated lifting gear / device and slinging techniques to be used. The dogman may carry out a test lift to assist in determining the best slinging technique. Where ever possible choke' the load.	5	Dogman
			14	**Admin/Isolate** - No lifting of materials over site sheds. If it is unavoidable, the sheds are to be vacated (under instruction from site management) prior to lifting over sheds. Erect barricades and implement traffic management plan if required. Check sheds for contents and persons prior to any lifting.	6	Dogman/ Site supervisor
	Site Crane Lifts	Load falling, injury to persons, damage to property.	14	Note: Formwork joists can only be landed directly onto bearers where frames are erected at a single height 1m. If bearers are to be landed on frames over this height then cradling of the pack from alongside the frames, then hoisted onto the bearers. Allowing the dogman to unhook from the ground.	9	dogman

		Over loading of landing area.	**14**	**Admin/Engineer -** Dogman to check landing zone, communicate with site supervisor for confirmation that relevant back propping or engineer's certifications are available. This must be done prior to landing the load.	**9**	Dogman
		Plant Collision	**14**	**Admin -** Duel or multiple crane jobs may require site specific permits to be obtained prior to the commencement of work. Tool box talk to be conducted on site with all relevant parties. Other plant operators to be present, i.e. concrete pump or boom operators.	**9**	Crane Crew

Qualifications

Qualification required to carry out the task?	Who is required to have the qualification	When will this be done?
Safety Advisor	WHSE Coordinator is responsible for the implementation and induction into the SWMS	Prior to work commencing and ongoing by workplace audits and site inspections.
Construction Induction Card. (White Card)	All workers.	Prior to commencing work.
Asbestos awareness card	All workers.	Prior to commencing work.
Dogging High Risk License	Dogman	Prior to commencing work.
Rigging High Risk License	Riggers	Prior to commencing work.
Crane Operator High Risk License	Crane Operators, all classes	Prior to commencing work.
RAR Group Induction	All RAR employees	Prior to commencing work

SWMS Review

SWMS Implemented	19.9.16
Last Review Date	1.3.21 R-6 RG
Person Conducting Review	Dick Garrety
Position	WHSE Coordinator

Sign Off

"I, the undersigned confirm that:
1. The SWMS and relevant Legislation /Codes of Practice to this task has been explained to me;
2. The contents are clearly understood by me;
3. My qualifications are current to undertake this activity;
4. I have been consulted in the preparation of the SWMS, and
5. I will comply with the SWMS otherwise work will stop immediately;
6. I will alert my supervisor if I believe I am not trained adequately to undertake any tasks".

Site risk assessments may require SWMS to be amended to suit the task and conditions, this will be done in consultation with RAR crane crews, site management and RAR WHSE Coordinator. Induction into RAR SWMS was conducted by Dick Garrety.

Name	Date	Signature	Name	Date	Signature