# Safe Work Method Statement
# Lifting Structural Steel

**HRSWMS No. 6**
**Revision 8**

| | | | |
|---|---|---|---|
| **Organisation** | RAR Cranes Australia Pty Ltd | **Contact** | Andrew Bodman |
| **ABN** | 53 629 970 252 | **Contact Position** | Director |
| **Address** | 38 Bedford St, Queanbeyan, NSW 2620 | **Contact Phone** | 02 6299 6100 |

| | | | |
|---|---|---|---|
| **Project Details** | Detailed RAR Site Specific Job Docket | **Supervisor** | |
| **Activity** | Lifting Mechanical and Electrical Plant | **Position** | Crane Operator |
| **Resources** | Crane Driver/Dogman/Rigger | | |

| | | | |
|---|---|---|---|
| **Plant** | Crane detailed on RAR Job Docket | | |
| **PPE Required** |  Above is the minimum PPE to be worn at all times. | **Injuries and Incidents** | All injuries and Incidents are to be reported to Head Contractor and RAR Management |

| | |
|---|---|
| **Maintenance** | Every 250 hours as per manufacturers specification, Daily Pre-Start checklists |
| **Materials Involved** | Plant, Chains, slings, timber, lifting equipment. |
| **SWMS Review** | SWMS are monitored and reviewed annually or as required. Amended only after consultation with RAR staff and Safety Advisor |

**Emergency Procedures**

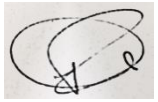
**Plant Mechanical Failure**

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

**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 | 15/04/2023 |

# 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 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 | No |
| 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 |
| 22 | Involves the cutting of crystalline silica material using a power tool or mechanical process | No |

**The RAR CLEAR Priciples are to be used for Every Lift:**

**C**ommunication

- Radio is working or you are in view of the driver
- Give clear and precise directions

**L**ifting gear is appropriate for the lift

- Chains/slings/shackles et. Are rated for the lift
- Chain size, Angle factor and Reeve factors considered
- All lifting gear is inspected before use

**E**very load is inspected 360 degrees before lifting

- Check position and bite of chains/slings and look for loose items
- Come up slowly on the hook until clear of all obstructions

**A**rea of work area is clear

- Check for – Public/other workers, Vehicles/plant, Powerlines, Scaffold, Trees

**R**echeck under load for loose items before going above head height

**If you have any concerns about a lift STOP immediately. Clear the area and bring the load back to the ground. If issue cannot be resolved call your supervisor**

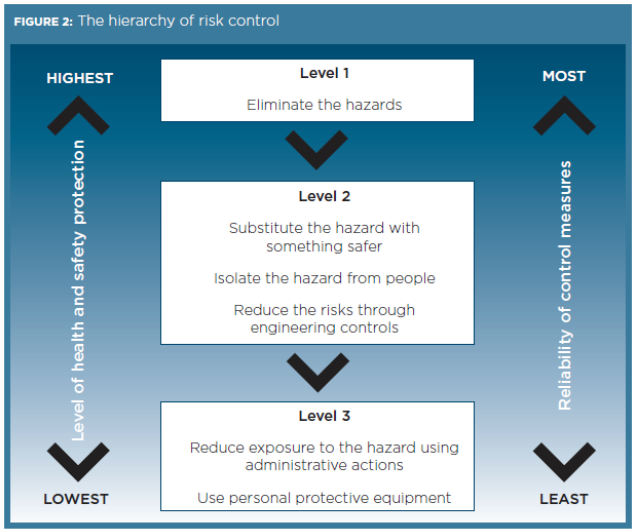
| Likelihood: How likely is it to happen | Consequences: How severely can it hurt someone? Minor | Moderate | Major | Extreme |
|---|---|---|---|---|
| Very Likely | 7 Medium | 11 Medium | 14 High | 16 High |
| Likely | 4 Low | 8 Medium | 12 Medium | 15 High |
| Unlikely | 2 Low | 5 Low | 9 Medium | 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 the wrong location | 14 | **Eliminate -** Head contractors to be contacted before entering onto site to confirm set up location. | 9 | Crane Crew |
| | | Personnel and Plant not site compliant | 11 | **Admin –** Complete Head Contractor Site Induction and Plant Compliance paperwork before commencing work. | 3 | Crane Crew |
| | | Crushing of pedestrian | 14 | **Engineer** – Dogman to exit crane and act as spotter when crane is moving on site.<br>Orange flashing light/s operational when moving onsite and reversing beeper to be in operation when reversing. | 9 | Crane Crew |
| | | Injury due to tripping over materials on the ground | 11 | **PPE –** Ankle high, lace up Safety Boots to be always worn when outside crane cab. | 3 | Crane Crew |
| | | Being struck by plant | 14 | **PPE** - Hi Visibility clothing to be worn at all times. | 9 | Crane Crew |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Potential exposure to airborne contaminants | **11** | **Admin** – Visually inspect work site activities and assess tasks that may create dust/airborne contaminants.<br>**Isolation** – **DO NOT** conduct works in an area where airborne contaminants or Silica dust are being generated. If other site trades are not controlling their hazards report it to the site supervisor.<br>**Admin** – Notify site safety team & RAR management if activities are deemed unsafe due to potential contact with airborne contaminants. | **5** | Crane Crew |
| 2 | Complete Pre-Start Daily Checklist for crane. | Crane not operating as per manufactures specifications. | **14** | **Engineer** - Complete Daily Operator Checks on Crane and Lifting Gear each morning before commencing work and fill in Daily Operator Checklist. If a safety malfunction is identified, equipment is not to be operated and Lock Out fitted. Head Contractor to be notified of Lock Outs. | **9** | Crane Driver |
| 3 | Complete RAR Site Specific Risk Assessment and Toolbox Talk. | Crane not setting up in suitable area or in suitable conditions. | **14** | **Isolate** - Before setting up crane complete RAR Site Specific Risk Assessment & Toolbox Talk on the RAR Site Specific Job Docket. Consult with crew and Head Contractor Forman and ask all participants to sign off before commencing works. This Risk Assessment asks the crew and foreman to consider the risks associated with setting up a crane on site, before it is set up. | **9** | Crane Crew |
| 4 | Set up crane | | **14** | **Admin -** Complete all steps in **RAR SWMS No.1 Crane Setup/Pack up**. | **9** | Crane Crew |

| | | | | | | |
|---|---|---|---|---|---|---|
| 5 | Hooking up loads | Load falling | 14 | **Engineer -** Only qualified Dogman (holds a High Risk license) to hook up a load and direct the crane. Ensure all loads are secured to prevent risk of item falling.<br><br>If unsure of how to sling the load, ask questions of other RAR employees and your supervisor.<br><br>Complete a test lift if unsure.<br><br>**Admin -** If the dogman or crane operator has any reason to believe the lift is unsafe or dangerous the lift should not proceed.<br><br>**Admin** - Safety concerns are to be reported to site supervisor, relevant risks are to be managed and safe conditions confirmed prior to recommencing the lift.<br><br>**All lifts are at the discretion of the crane crew. If there is any doubt do not lift.**<br><br>**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.<br><br>**Admin** – Prior to lifting the load the 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). | 9 | Crane Crew |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | Notify foreman of access requirements.<br><br>**Admin/Isolate** - Dogman to inspect surrounding area prior to lift, clear other personnel from the lift area (notify of intent to lift). While lifting monitor obstructions, ensure load is clear of obstructions and under control at all times.<br><br>**Engineer** – Use tag lines when required. If load is to be lifted or landed in a tight area use a tag line. When using tag lines ensure you are aware of the line being caught on obstructions (scaffold etc.) | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Lifting gear / Plant failure | 14 | **Admin -** Dogman to estimate / calculate or seek manufacturers specifications on loads to be lifted. 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. Wherever possible choke the load.<br><br>**Engineer -** Use correct sized lifting gear for the load being lifted.<br><br>All lifting gear must be inspected prior to use. 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.<br><br>Refer to crane lifting register and sling register.<br><br>**Admin -** Refer to and follow manufacturer's instructions and specifications. Consult crane load charts to verify that the crane has the necessary rated capacity and design classification prior to carrying out any lift. If weight of item is unknown complete a test lift. If load cannot be lifted within the SWL of the crane at that radius, **stop the lift** and complete a lift study to determine correct crane for lift. | 9 | Crane Crew |
| | | **Load striking Dogman - Multi-level (xmas tree) lifts** | 14 | **Admin - Multi-level (xmas tree) lifts are NOT permitted.** | 9 | Crane Crew |

| | | | | | | |
|---|---|---|---|---|---|---|
| 6 | Lifting structural steel | **Lifting steel beams and columns** – Load falling | **14** | **Engineer -** Double wrap and choke chains around all steel beams and columns to prevent slipping. Use two legs whenever possible.<br><br>Columns without cleats need to be double wrapped, with a half hitch to prevent slipping.<br><br>If single leg chain is required to balance an item, only one single steel element to be lifted at a time in this manner and it must be double wrapped.<br><br>**Admin** - Use tag lines where required to avoid the need for hands/fingers being trapped in between steel items.<br><br>**If in any doubt with the lifting configuration, STOP and ask your supervisor.** | **9** | Crane Crew |
| | | **Purlins** – Load falling | **14** | **Engineer -** Double wrap purlins when lifting. If lifting a pack of purlins ensure that the load is level so no item can move.<br><br>**Isolate -** Monitor weather. If wind is present, use a tag line if suitable. Do not lift purlins in high winds. Be aware of rain/moisture. | **9** | Crane Crew |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | **Loose small items** – Load falling | **14** | **Engineer -** All small items that can't be contained by lifting chains must be placed in a suitable lifting bin.<br>**Isolate -** Ensure that sufficient access is provided for unloading from the truck.<br>**Isolate -** Ensure that sufficient fall protection is in place before entering onto roof.<br>**Isolate -** Ensure landing area is suitable for landing the load and make sure it is clear of trip hazards. Once load has been landed ensure no items are protruding from load. | **9** | Crane Crew |
| 7 | Landing or releasing structural steel loads | Load falling and or Structural collapse | **14** | **Isolate -** Ensure landing area is suitable for landing the load and make sure it is clear of trip hazards. Once load has been landed ensure no items are protruding from load.<br>**Isolate –** Be aware of cleats and sharp edges on steel items.<br>**Engineer** – If steel is being connected to a structure ensure you take direction from the site riggers as to when the load can be released. | **9** | Crane crew |
| | | Falls from height | **13** | **Admin –** Prior to lifting the load ensure there is a safe way to release the load.<br>**Engineer** – If required and you have the appropriate qualifications use an EWP to access the chains. | **8** | Crane Crew |

## SWMS Review

| | |
|---|---|
| **SWMS Implemented** | 15/04/2023 |
| **Last Review Date** | 17.4.23 R-8 |
| **Person Conducting Review** | Andrew Bodman / Dick Garrety |
| **Position** | WHSE Coordinator |

## Qualifications

| Qualifications required to carry out the task? | Who is required to have the qualification? | When will this be done? |
|---|---|---|
| Safety Advisor | Safety advisor 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 |
| Silica awareness training | 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 |

**By signing below I confirm that:**

**1. I confirm that I have a copy of this SWMS on my phone (Employment Hero)**

**2. The SWMS and relevant Legislation /Codes of Practice to this task has been explained to me**

**3. I fully understand this SWMS and I have been consulted in the preparation of this SWMS**

**4. My qualifications are current, and I am competent to undertake this activity**

**5. I will comply with the SWMS otherwise I will stop work 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 |
|---|---|---|---|---|---|
| Adam Smith | | | Christian Carnall | | |
| Andrew Bell | | | Daniel Green | | |
| Angus Dunlop | | | Darren Bailey | | |
| Anthony Pidcock | | | Dean Zammit | | |
| Ashley Charnock | | | Edward Gomez | | |
| Blaine Lawler | | | Edward Taungakava | | |
| Bradley Cotterill | | | Edward Vicente | | |
| Brendon Kelly | | | Evan Steele | | |
| Brett Leape | | | Geoffrey Ryan | | |
| Brett Scarman | | | Glen Turner | | |
| Ilifeleti Folauhola | | | Rebecca Quinn | | |

| Name | Date | Signature | Name | Date | Signature |
|---|---|---|---|---|---|
| Jayden Hately | | | Robert Morrison | | |
| Jesse Caridi | | | Sheldon Van Der Kley | | |
| Joel Newton | | | Simon Condon | | |
| Justin Bennett | | | Stephen McCarter | | |
| Karl Davies | | | Stuart Burgoyne | | |
| Luke Johnson | | | Tayla Bennett | | |
| Luke Rukavina | | | Timothy Blayden | | |
| Madeleine Ashton | | | Troy Stratton | | |
| Mark Solomon | | | Trent Jones | | |
| Mathew Rukavina | | | Vedran Juretic | | |
| Michael Cole | | | William Lueckhof | | |
| Michael Hajdarovic | | | Zac Miller | | |
| Mitchell Barnes | | | | | |
| Mitchell Williams | | | Graeme Gold | | |
| Paul Tasker | | | Keni Kawaleva | | |
| Raul Abell | | | Mathew Lewis | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |