PARRAMATTA CRANES PTY LTD

SAFE WORK METHOD STATEMENT / JSA

Latest update 1st March 2024

LOAD SHIFTING MECHANICAL PLANT AND EQUIPMENT

PROJECT NAME:		PROJECT NO:	
PROJECT ADDRESS:			
WORK ACTIVITY:			
ON SITE CUSTOMER, NAME OF COMPANY:		ON SITE PERSON RESPONSIBLE FOR IMPLEMENTATION OF THIS SWMS:	

Personnel Qualifications & Experience Required	Slewing Cranes and Pick and Carry cranes up to 60 tonnes. (Crane Operator must have license or certificate of competency to operate the crane) (Persons slinging the load and in control of the load during movement must be qualified as a Dogman or Rigger)
Training to be provided	WHS (OHS) Induction Card Training, Site Specific Induction training and training into task specific SWMS controls. **Note: The operator must have adequate training or instruction on how to set up and safely use Mobile Crane irrespective of experience with larger cranes, as well as adequate supervision.**
Safety Equipment Required	***PPE - Mandatory*** High Visibility Clothing and Safety Footwear, Hard Hat, Safety Glasses. ***PPE - Task Specific*** Other PPE as per SWMS, (M)SDS or site displayed signage ***Signage & Barriers*** Barriers and signage for traffic control and exclusion zones
Plant and Equipment to be used	Pick and Carry Mobile Franna Crane, chains, slings, shackles and any other Safe Work (Work Cover) approved lifting equipment as needed.
Plant and Equipment Maintenance and Inspections Required	***Maintenance*** Operator start up checks, Maintenance as per manufacturers recommendation ***Inspections*** Competent person to conduct risk assessment (check list) prior to use on site
Engineering Details, Certificates, Regular approvals	Design Registration with (Safe Work) Work Cover, Annually registered SWL Clearly displayed. **Note: Where lifts are complex, a detailed lift plan should be developed and adhered to.**
Emergency planning	Refer to Site Project Safety Plan, Section on Emergency Planning and Procedures Site Induction. First Aid Kits to be available on site and in vehicles.

Legislation	**NSW** NSW Occupational Health and Safety Act 2011 NSW Occupational Health and Safety Regulation 2017
Codes of Practices relevant to this work process	**National** National Code of Practice for Construction Work August 2019 National Code of Practice for Induction for Construction Work May 2007 National Code of Practice for Prevention of Falls in General Construction 2018 National Code of Practice for Control of Workplace hazardous Substances [NOHSC:2007(1994)] National Code of Practice for Managing Noise and Preventing Hearing Loss at Work October 2018 National Code of Practice for Manual Handling [NOHSC:2005(1990)] National Code of Practice for Prevention of Occupational Overuse Syndrome [NOHSC:2013(1994)] National Code of Practice for the Prevention of Musculoskeletal Disorders Caused from Performing Manual Tasks 2007 **NSW** Moving Plant on Constriction Sites CoP Risk Assessment CoP OHS Consultation CoP Electrical Practices for Construction Work CoP Noise Management & Protection of Hearing at Work CoP Work Near Overhead Structures
Standards applicable to this work process	National Standard for Construction Work August 2019 National Standard for Managing Risks of Plant in the Workplace 2019 National Standard for Managing Noise and Preventing Hearing Loss at Work 2018 National Standard for Licensing Persons Performing High Risk Work 2006 National Standard for Hazardous Manual Tasks 2018 AS/NZS 4360/ISO 31000 Risk Management AS1418.4 Tower Cranes (Design) AS2550.4 Tower Cranes (Safe Use) AS1418.1 General for all Cranes, Hoists and Winches (Design) AS2550.1 General for all Cranes, Hoists and Winches (Safe Use) AS2550.6 Guided storage and retrieving devices AS2550.1 Special Purpose Appliances AS1418.17 Workboxes (Design) AS3100 Approval and Test Specification - General Requirements for electrical equipment AS1269.2 Occupational Noise Management - Noise Control Management AS1336 Recommended Practices for Occupational Eye Protection AS1715 Selection Use and Maintenance of respiratory protective devices/AS1716 Respiratory Devices AS1800 Occupational Protective Helmets - selection care and use AS2210 Occupational Protective Footwear Part 1 - Guide to selection, care and use AS2161.1 Occupational Protective Gloves - Selection, use and maintenance AS4602 High Visibility Garments
Guidance material applicable to this work process	Refer NSW Safe Work (Work Cover) website

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SITE SPECIFIC CONSIDERATIONS

SPECIAL TOOLS OR EQUIPMENT REQUIRED

TASK LIGHTING	TEMPORARY SCAFFOLD
ACCESS SCAFFOLD	LASER LEVEL
COMPRESSOR	
GENERATOR	
LEAD STANDS	
RCD	
ELECTRICAL TEST & TAG TESTER	

HAZARDOUS MATERIALS *(ATTACH (M)SDS)*

DIESEL	SUN SCREEN
UNLEADED PETROL	
LEADED PETROL	
OILS	
GREASES	
SEALANTS	
DEGREASER	

OTHER POTENTIAL SITE SPECIFIC HAZARDS CONSIDERED

ELECTRICAL	DUST
CONFINED SPACES	HEIGHT WORK
MECHANICAL (CRUSHING)	REMOTE WORK
RISKS FROM OTHER TRADE ACTIVITIES	GROUND CONDITION
SCAFFOLD ACCESS	COMPRESSED AIR
MOVING PLANT/EQUIPMENT	LIGHT/DARK
HEAT	EXCAVATIONS/PITS
FROST/ICE	PUBLIC PROXIMITY SITE/SITE SECURITY
SITE TRAFFIC	OTHERS

AS A RESULT OF THE ABOVE, ARE ADDITIONAL CONTROLS REQUIRED?	YES	NO	UNSURE*

IF UNSURE CONSULT WITH SENIOR SITE MANAGEMENT PRIOR TO WORK COMMENCING

DETAILS OF CONTROL METHOD: (TICK)	COMPANY SWMS ALREADY PROVIDES CONTROLS	COMPANY SWMS AMENDED TO INCLUDE SITE SPECIFIC HAZARDS	JOB SAFETY ANALYSIS OR OTHER RISK ASSESSMENT TOOL COMPLETED	SIGNED INTO PRINCIPALS/OTHER SMWS OR RISK ASSESSMENT TOOL THAT PROVIDES CONTROLS

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SITE SPECIFIC CONSIDERATIONS

This Safe Work Method Statement is based on the following critical assumptions being valid, and remaining valid throughout the job. If any of these assumptions are violated, or are found to be threatened, the risk is to be re-assessed and suitable controls implemented, communicated to the at risk workers and recorded.

Item	Assumption
1	Supervisors are qualified and sufficiently experienced to communicate and implement the risk controls in this SWMS.
2	Supervisors will develop their own Toolbox Talk briefings to articulate the risk controls applicable to them and their team.
3	New workers who join the group/team/worksite will receive the full suite of induction training and safety briefings on relevant site risk controls
4	Individuals are not fatigued or under the influence of alcohol or drugs during the working day/shift.

WHS (OHS) Incidents

COMMON ROOT CAUSES	PRE CONDITIONS FOR ACCIDENTS
Workers taking their eyes off the job.	Rushing - Eyes off job, mind off job, moving into dangerous location.
Workers taking their mind off the job.	Fatigue - Impaired decision making/judgement.
Workers putting themselves in a dangerous situation.	Frustration - Mind not on the job.
Workers losing Grip, Balance, or Traction.	Complacency - Repetitious work, arrogance.
IT IS EVERYONE'S REPSONSIBILITY TO SELF TRIGGER SAFE BEHAVIOURS IF ANY OF THE ABOVE CONDITIONS ARE EXPERIENCED.	***MANAGERS AND SUPERVISORS NEED TO BE AWARE OF THE PRE CONDITIONS FOR ACCIDENTS WHERE POSSIBLE AND PRACITCABLE, GUARD THEIR WORKERS FROM THEM.***

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RISK MATRIX

All hazards must be ranked using the following risk matrix. All hazards are classified as High, Medium or Low. When assessing hazards ask yourself; ***does the hazard have the potential to;***

How severely could it hurt someone? or How ill could it make someone?	How likely is it to be that bad?			
A - Kill or cause permanent disability or ill health	H1	H2	H4	M7
B - Long Term illness or serious injury	H3	H5	M8	M11
C - Medical Attention and several days off work	H6	M9	M12	L14
D - First Aid needed	M10	M13	L15	L16

The numbers show you how important it is to do something

Residual Risk Action Required

Rating 1-6 ***High Risk*** Immediate Action Required - Redesign/Review Controls to Reduce Risk

Rating 7-13 ***Medium Risk*** Monitoring Required

Rating 14-16 ***Low Risk*** Monitoring will occur as part of the inspection regime

You are asked to consider two potential outcomes of an incident when using this risk matrix. You must first consider a risk without any other controls in place. This is called the initial risk (before risk). You must then apply controls within the control section of the SWMS. Once this is done reassess the risk rating and write it in the residual risk (after risk) column. The initial risk should be greater than the residual risk. This demonstrates the controls have put in place are working and have reduced the risk. *An example has been provided below;*

ACTIVITY *What are you doing?*	*HAZARDS AND RISKS* *Identify what can go wrong an what injuries and damage can this cause.*	*BEFORE RISK*	*CONTROLS* *Risk is to be controlled using hierarchy of control measures:*	*AFTER RISK*	*Person responsible for implementation of the controls.*	*SWMS on site reviews. Comment, date and initial*
Unloading materials						
Carrying material onto site	*Manual Handling injuries* *Trip Hazards* *Traffic Management, Traffic accidents*	*H2* *M9* *H2*	*Mechanical aids, team lifting, mechanical handling training* *Make sure access is clear of obstructions* *Unload only in areas set aside by principal contractor*	*H2* *M9* *H2*	*Contractor management* *Contractor management* *PC and SC management*	

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RISK MATRIX

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
Arriving at site, Planning, General Site Safety	• Lack of adequate Induction and training	**2**	**B**	**H5**	• Report to site office prior to entering site. • Ensure site induction takes place prior to commencing for all workers. • Induct all workers into site specific SWMS. • Operator and crew must be competent and licensed to undertake their specific tasks. • Ensure operator and crew has adequate training or instruction on how to set up and safely use the Crane before operation. • Conduct Tool Box Talk to ensure all workers are clear about access/egress, emergency procedures, site rules and first aid arrangements. • Ensure all workers are appropriately trained to undertake their tasks - provide training where required. • Appropriate barriers and signposts to be in place prior to commencing work. • Ensure workers are consulted and communicated to on a regular basis regarding hazards for the site.	**4**	**B**	**M11**	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
Set up of Crane/General Planning	• Crane not set up properly and site specific considerations not identified Warning: If not set up and operated according to the manufacturer's instructions, they can overturn with very little warning.	**2**	**B**	**H5**	• The crane must be set up and operated according to the manufacturer's instructions • Operators must have read and be familiar with the operators handbook before use Site specific factors must be taken into consideration E.G Site access, ground conditions, Power lines No Go Rule, weather/wind conditions, traffic control, permits, underground services. • Operator is to complete checklist prior to operating Crane on site In addition, the following are to be available on site: • Load configuration rating charts • Operators handbook • Maintenance records • Inspection log book	**4**	**B**	**M11**	
	• Other mobile plant or obstructions	**2**	**B**	**H5**	• Ensure safe access when mobilizing the Crane (liaise with Primary Contractor) • Ensure all access are barricaded off (consult re fire stairs)	**4**	**B**	**M11**	
	• Unstable terrain	**2**	**B**	**H5**	• Conduct a site inspection prior to work with risk assessment. Consider terrain and conduct risk assessment if any additional hazards exist. E.G. suspended slabs or services close under ground. • Travel on slopes should be up or down the slope – not across the slope. • Traversing a slope is to be avoided at all times.	**4**	**B**	**M11**	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
Set up of Crane/General Planning	• Inadequate pre-start inspections causing failure of crane or lifting gear. Note: Operators to ensure daily crane checks are performed and safety devices are functioning. Note: Dogman and/or riggers to check all lifting gear to be used is in usable order and compliant for crane to use.	**2**	**B**	**H5**	• A visual inspection and functional test of the crane must be carried out by the crane operator before the commencement of each work shift. This should include inspection and testing of the following: 1) all relevant items indicated in the operations manual; 2) operating and emergency controls 3) brakes 4) safety switches and interlocks, including limiting and indicating devices 5) visual inspection of the structure. 6) wire ropes to ensure they are on the drum and correctly reeved on the sheave. 7) Wire ropes for obvious damage. • All personal protective equipment should be inspected to ensure it is functioning correctly • Lifting chains & slings must be annually certified. Chains to have compliant readable tags. • If slings younger than a year, no annual certificate needed. Either way, slings to be visually and 'by touch' inspected, to confirm ok to use.	**4**	**B**	**M11**	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
	• Communication	**2**	**B**	**H5**	• A reliable method of communication between a crane operator and other persons is essential for safe crane operation. • Only one dogman should give visual, audible and/or radio signals at any time. • Persons using radio equipment should be familiar with the manufacturer's operating instructions. • All persons using radios should be aware of the risk of interference and signals from other radio equipment. Work should stop immediately if there is a loss of radio communication.	**4**	**B**	**M11**	
Set up of Crane/General Planning	• Public and other personnel protection	**2**	**A**	**H2**	• Dogman or competent spotter to ensure all persons, including general public, do not enter operating zone	**4**	**A**	**M7**	
	• Overhead and other static structures	**2**	**A**	**H2**	• Conduct a site specific risk assessment to ensure no overhead power lines or other overhead obstructions are so close, as to cause possible risk. • If necessary, use electrical spotter.	**4**	**A**	**M7**	
	• Improper set up causing crane roll over, impact with structures or overhead hazards	**1**	**A**	**H1**	• Operator to ensure all solid outrigger pads are in place. • Sufficient clearances are to be maintained between the crane and other plant and structures, such as other mobile plant, scaffold / formwork, structure and overhead power lines.	**4**	**A**	**M7**	
	• Lack of adequate ventilation	**2**	**C**	**M9**	• Ensure area is well aired to avoid excess fumes. • Use exhaust fans if needed. • Open warehouse doors & windows.	**4**	**C**	**L14**	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
General Lifting such as: Steel Structure Lifting Steel Struts Lifting Steel trusses Lifting Steel beams Lifting Steel Structures Lifting steel props Lifting sand bags, cement and bricks from a brick cage Lifting Formwork Lifting Steel Shutters Lifting signage into place	• Competency of operator Warning: Only authorized and fully trained operators are permitted to operate Mobile Crane. Note: Where lifts are complex, a detailed lift plan should be developed and adhered to. Eg. Where equalizing pullies or chain blocks are used. Lifting steel beams or structures where chains and slings are used comes under general lifting.	**2**	**A**	**H2**	• Information regarding the crane's operating instructions to be available. • The operator must always exercise proper diligence and operate the crane safely. • If the operator has reason to believe that a lift may be dangerous or unsafe, the operator must refuse to proceed until the concern has been reported, relevant risks have been managed and safe conditions have been confirmed. • If the load is obstructed from the dogman's view at any time during the lifting operation, the operator may need to assume control of the load until the load comes back into view of the dogman. • Ensure provision and awareness of crane's load chart, including all notes and warnings. • Ensure operator is able to calculate or determine the crane's actual net capacity in every possible configuration.	**4**	**A**	**M7**	
	• Traveling with a fixed load Note; Where appropriate operators and dogman must use tag lines to prevent freely suspended loads swinging.	**2**	**A**	**H2**	• Operator must retract the boom and lower the load as close to the ground as possible. • If the load is freely suspended, the operator should travel with the load elevated high enough, to prevent it snagging on the ground or other obstacles. • Operator to accelerate and brake the mobile crane gently, to minimize load swing. • When carrying freely suspended load, do not exceed walking pace.	**4**	**A**	**M7**	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
General Lifting continued	• Dogging and Rigging – lack of adequate training – risk of dogman being struck by load or crane.	**2**	**B**	**H5**	• Persons slinging the load and in control of the load during movement must be qualified as a dogman or rigger. • The dogman must not stand between the suspended load and the mobile crane. • The dogman must be in communication with crane operator at all times • Use 2 way radio's, visual signals or whistle signals for communications if necessary	**4**	**B**	**M11**	
	• High wind conditions	**2**	**A**	**H2**	• Do not attempt to lift loads during high winds. • Use tag lines when lifting formwork, shutters and other materials to prevent impact with structures.	**4**	**A**	**M7**	
	• Uncontrolled loads causing impact or falling materials Warning: Do not pass loads over workers or pedestrians.	**2**	**A**	**H2**	• The load chart for the crane should identify each lift attachment location, and the corresponding rated capacity for the crane at that location. The load chart is to be located inside the operators cabin inclusive of the following information: • Manufacturer's name and model • Boom identification and length, particularly where different boom configurations may be used. • Deductions for attachments, so that the net allowable load to be lifted can be determined • Either the rated load at the least stable position, or where variable load rating is provided for, the means to clearly determine the load position in accordance with the rated capacity chart.	**4**	**A**	**M7**	

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General Lifting continued	• Lifting Points – risk of Striking Crush injuries from falling materials / loads. • Warning: If lifting attachments are supplied with the plant, they are to be designed by an engineer with written certification provided.	**2**	**A**	**H2**	• All lifting points on crane must form a closed eye to which a load rated shackle may be attached • Each lifting attachment, sling and shackle must have a SWL, or working load limit greater than or equal to that of the load. These attachments must be suitable for safely handling the load. • Dogman/Rigger to ensure no part of the load is loose, the load is properly balanced, not likely to become snagged and the load will not contact any object or constitute a hazard to any person when it is lifted.	**4**	**A**	**M7**	
	• Fall from Heights	**1**	**A**	**H1**	• Ensure edge protection is provided. • Where no edge protection is provided, a safety harness may be used to prevent falling from edge.	**4**	**A**	**M7**	
Traffic Managemement	• Vehicle Injury				• Appropriate traffic management must be in place where required. • Traffic management to be in accordance with Australian Standards. • Permits to be obtained where required. • Mobile plant to be fitted with operating flashing lights & reverse beepers. • All persons working in vicinity of mobile plant to be wearing high visibility clothing.	**2**	**A**	**H2**	

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Fatigue	• Workload. Length of the shift. Previous hours and days worked.	**2**	**B**	**H5**	Fatigue is mental or physical exhaustion that stops a person from being able to function normally. Methods that will be used to manage fatigue in crane operations include: • Rotating the crane operator • Rotate other individual members of the crew suffering the effects of fatigue, such as Dogman, Riggers and Spotters. • Ensure crew members have adequate rest and meal breaks	**4**	**B**	**M11**	
Security of Crane	• Vandalism	**2**	**B**	**H5**	• Do not leave keys in ignition • Secure vehicle overnight • Park in area as approved by Primary Contractor • Pre-start inspections prior to use • Lock out faulty plant until maintenance is carried out.	**4**	**A**	**M7**	
Site Clean Up	• Trip Hazard • Falling objects • Back, Neck and Head Injuries • Lacerations	**2**	**D**	**M13**	• Ensure work area is kept in a tidy state throughout all works and that all items are stacked neatly in corner or as a minimum all workers are aware of items around there work environment • Ensure that after works are complete and area is left free of debris and any items left are securely stored	**4**	**D**	**L16**	

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INDUCTION RECORD – LOAD SHIFTING PLANT AND EQUIPMENT

I, the undersigned confirm that the (1) SWMS has been explained to me (2) its 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.

Names of Persons who have assisted in the development and have been inducted into SWMS					
Workers Name	**Qualifications**	**Workers Signature**	**Person Inducting Worker (Print name)**	**Signature of Person Inducting Worker**	**Date of Induction**