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SAFE WORK METHOD STATEMENT /
JSA Latest update 1/10/2025
LOAD SHIFTING MECHANICAL PLANT AND EQUIPMENT

Project Name:	Prime Constructions		Project No:	
Project Address:	41 Roberts rd, Chullora.			
Work Activity:	Lifting of solar panels and other supplies to rooftop area			
On Site Customer, Name of Company:	Green Renewable Energy Solutions Pty Ltd	On site person responsible for implementation of this SWMS		Martin Milewski

Personnel Qualifications & Experience Required	Slewing Cranes and Pick and Carry cranes up to 60 tonnes. (Crane Operator must have licence 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 Induction 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	<u>PPE - Mandatory</u>	<u>PPE - Task Specific</u>	<u>Signage & Barriers</u>	
	High Visibility Clothing and Safety Footwear Hard Hat, Safety Glasses	Other PPE as per SWMS, (M)SDS or site displayed signage	Barriers and signage for traffic control and exclusion zones	
Plant and Equipment to be used	Pick & 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	<u>Maintenance</u>		<u>Inspections</u>	
	Operators start up checks. Maintenance as per manufacturers recommendation		Competent person to conduct risk assessment (check list) prior to use on site	
Engineering Details, Certificates, Regulatory 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 Work Health and Safety Act 2011 NSW Work Health and Safety Regulation 2017
Codes of Practices relevant to this work process	National National Code of Practice for Induction for Construction Work May 2007 National Code of Practice for the Prevention of Falls in General Construction 2018 National Code of Practice for the 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 the 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 NSW Code of Practice for Construction Work August 2019 NSW Code of Practice Moving Plant on Construction Sites 2004 How to Manage Work Health and Safety Risks CoP 2019 WHS Consultation, Cooperation and Coordination CoP 2022 Managing Electrical Risks CoP 2019 Managing Noise and Hearing Loss at Work CoP 2022 Hazardous Manual Tasks NSW 2018 Managing the risk of falls at workplaces NSW 2019 Managing the Risks of Plant in the Workplace NSW 2022
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) AS 2550.1 General for all Cranes, Hoists and Winches (Safe Use) AS2550.6 Guided storage and retrieving devices AS 2550.1 Special Purpose Appliances AS 1418.17 Workboxes (Design) AS 2550.1 Workboxes (Safe Use) AS3100 Approval & 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 & maintenance AS4602 High Visibility Garments
Guidance material applicable to this work process	https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice

SITE SPECIFIC CONSIDERATIONS									
Special Tools or Equipment Required		Hazardous Materials (Attach (M)SDS)			Other Potential Site-Specific Hazards considered (Tick Box below)				
☐ Task Lighting	☐ Electrical Test & Tag	☐ Diesel	☐ Degreaser	☐ Electrical	☐ Heat	☐ Ground condition			
☐ Access Scaffold	☐ Temporary Scaffold	☐ Unleaded Petrol	☐ Sunscreen	☐ Confined Spaces	☐ Frost / Ice	☐ Compressed air			
☐ Compressor	☐ Laser Level	☐ Leaded Petrol	☐	☐ Mechanical (Crushing)	☐ Site Traffic	☐ Light / Dark			
☐ Generator	☐	☐ Oils	☐	☐ Risks from other trade activities	☐ Dust	☐ Excavations/ Pits			
☐ Lead Stands	☐	☐ Greases	☐	☐ Scaffold Access	☐ Height Work	☐ Public proximity to site, site security			
☐ RCD	☐	☐ Sealants	☐	☐ Moving plant/ equipment	☐ Remote work	☐ Others			
As a result of the above, are additional controls required: (circle) 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 SWMS or Risk Assessment tool that provides controls		

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 SMWS.
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 /work site 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	
Workers taking their eyes off the job	Pre-Conditions for Accidents
Workers taking their mind off the job	Rushing – eyes off Job, mind off job, moving into a dangerous location
Workers putting themselves in a dangerous situation	Fatigue – impaired decision making / judgement
Workers losing Balance, Grip or Traction	Frustration – mind not on the job
	Complacency – repetitious work, arrogance
It is everyone's responsibility to self-trigger safe behaviours if any of the above conditions are experienced.	
Management and Supervisors need to be aware of the preconditions for accidents, and where possible and practicable, guard their workers from them.	

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 likely is it to be that bad?			
	1 - Very likely Could happen at any time	2 - Likely Could happen Sometime	3 - Unlikely Could happen but very rarely	4 - Very Unlikely Could happen but probably never will
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 Rating 7-13 Medium Risk Rating 14-16 Low Risk Immediate Action Required –Redesign / Review Controls to Reduce Risk Monitoring Required 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 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 you have put in place are working and have reduced the risk. An example has been provided below.

ACTIVITY <i>What are you doing?</i>	HAZARDS AND RISKS <i>Identify what can go wrong and what injuries or damage can this cause.</i>	BEFORE RISK	CONTROLS <i>Risk is to be controlled using hierarchy of control measures:</i>	AFTER RISK	Person responsible for implementation of the controls	SWMS on site reviews. <i>Comment, date and initial</i>
Unloading materials						
Carrying material onto site	Manual Handling injuries	H2	Mechanical aids, team lifting, manual handling training	M7	Contractor management	
	Trip hazards	M9	Make sure access is clear of obstructions	M12	Contractor management	
	Traffic management – traffic accidents	H2	Unload only in areas set aside by principal contractor	M7	PC and SC management	

ACTIVITY What are you doing?	POTENTIAL HAZARDS	BEFORE CONTROLS			CONTROLS Risk is to be controlled using hierarchy of control measures: 1. Elimination (completely remove from hazard); 2. Substitution (replace the hazard with a lesser hazard); 3. Isolation/ Engineering controls (make a structural change to the work environment or work process) 4. Administration controls (procedures); 5. Personal protective equipment .	AFTER CONTROLS			SWMS on site reviews. <i>Comment, date and initial.</i>
		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 & crew must be competent and licensed to undertake their specific tasks. - Ensure operator & crew has adequate training or instruction on how to set up and safely use the Crane before operation. - Conduct Toolbox 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 on a regular basis regarding hazards for the site.	4	B	M11	

ACTIVITY What are you doing?	POTENTIAL HAZARDS	BEFORE CONTROLS			CONTROLS	AFTER CONTROLS			SWMS on site reviews. Comment, date and initial.
		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	Risk is to be controlled using hierarchy of control measures: Elimination (completely remove from hazard); Substitution (replace the hazard with a lesser hazard); Isolation/ Engineering controls (make a structural change to the work environment or work process) Administration controls (procedures); Personal protective equipment. - 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 - Crane safe or maintenance records - Daily Inspection logbook	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 points are barricaded off	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 underground services. - Travel on slopes should be up or down the slope – not across the slope. - Traversing a slope is to be always avoided.	4	B	M11	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
Set up/General Planning continued	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: - all relevant items indicated in the operations manual - operating and emergency controls - brakes - safety switches and interlocks, including limiting and indicating devices - visual inspection of the structure. - wire ropes to ensure they are on the drum and correctly reeved on the sheave. - 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	
Set up/General Planning continued	Communication	2	B	H5	- A reliable method of communication between a crane operator and other people is essential for safe crane operation. - Only one Dogman should give visual, audible and/or radio signals at any time. - All dogmen using radio equipment should be familiar with the manufacturer's operating instructions. - All dogmen 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	
	Public and other personnel protection	2	A	H2	Dogmen or competent spotter to ensure all people, including 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 an 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 the 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 sandbags, cement and bricks using 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. E.g. Where equalizing pulleys 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 dogmen'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 dogmen. - Ensure provision and awareness of crane's load chart, including all notes and warnings. - Ensure operator can calculate or determine the crane's actual net capacity in every possible configuration.	4	A	M7	
		2	A	H2		4	A	M7	
	Traveling with a fixed load Note: Where appropriate operators and dogmen must use tag lines to prevent freely suspended loads swinging.				- 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 control the mobile crane gently to minimize load swing. - When carrying any load, do not exceed walking pace.				

ACTIVITY What are you doing?	POTENTIAL HAZARDS	BEFORE CONTROLS			CONTROLS	AFTER CONTROLS			SWMS on site reviews. Comment, date and initial.
		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
General Lifting continued	Dogging and Rigging – lack of adequate training – risk of dogmen being struck by load or crane.	2	B	H5	Risk is to be controlled using hierarchy of control measures: Elimination (completely remove from hazard); Substitution (replace the hazard with a lesser hazard); Isolation/ Engineering controls (make a structural change to the work environment or work process) Administration controls (procedures); Personal protective equipment. - 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 always be in communication with crane operator - Use 2-way radios, 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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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
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	
Working at Heights	Fall from Heights	1	A	H1	- Ensure edge protection is provided. - Where no edge protection is provided, a working from heights permit must be implemented by the customer or principal contractor onsite & completed before works commence. - A site specific emergency response plan must be provided/implemented by the principal contractor or customer & signed off prior to commencement of works in case of emergency.	4	A	M7	
Traffic Management	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 and PPE	2	A	H2	

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
Fatigue	Workload. Length of the shift. Previous hours and days worked.	2	B	H5	Risk is to be controlled using hierarchy of control measures: Elimination (completely remove from hazard); Substitution (replace the hazard with a lesser hazard); Isolation/ Engineering controls (make a structural change to the work environment or work process) Administration controls (procedures); Personal protective equipment. 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 Dogmen, 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	B	M11	
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 their work environment - Ensure that after work is complete and area is left free of debris and any items left are securely stored	4	D	L16	

Identified Site Specific Risks & Potential Hazards

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		LIKELIHOOD	CONSEQUENCE	RISK RATING		LIKELIHOOD	CONSEQUENCE	RISK RATING	
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