Identify the hazard and eliminate or reduce the risk

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| Project | Collie Battery Energy Storage System | Date |  |
| Location |  | Permit No |  |
| Work area |  | JHA Ref No | JHA - |
| Job Description |  | | |

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| **Names of JHA team** | | | | **In the event of a medical emergency** | |
| Team Leader |  | Supervisor Signature |  | Name of First Aider |  |
| Team Members | Team Members | Team Members | Team Members | State the point where the injured person would be taken |  |
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|  |  |  |  | Recovery Method |  |
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All JHAs **expire** after 7 days. All personnel working on or entering the worksite are to **read and sign** onto this JHA **daily**

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| **With everything we do we will consider the Hierarchy of Controls and ask ourselves…**  Can I ***Eliminate*** the hazard altogether or ***Substitute*** with a safer alternative (process/substance)?  How can I ***Isolate*** (de-energise and lock out) the risk or implement ***Engineering***controls (guards, barricades)?  Can I Include ***Administration*** controls (reduce duration of exposure, increase supervision/inspection/training)?  Can I reduce the risk of harm with additional ***PPE*** (hearing protection, double eye protection, arc flash rated PPE)? |

**What hazards may be associated with this particular job?**

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| What are the **potential hazards** on the job? Consider the following, “X” where applicable and write into your JHA | | | | | | | | | | | |
| Electrical |  | Mechanical |  | Gravitational |  | Hot/Cold Objects |  | Climatic |  | Collision |  |
| Waste |  | Biomechanical |  | Thermal |  | Pressure |  | Ergonomic |  | Ground Condition |  |
| Hazardous Substance |  | Radiation |  | Noise/Vibration |  | Biological |  | Cultural |  | Fatigue |  |
| Foreign body |  | Dust |  | Asbestos |  | Slip/Trip |  | Cut/Pierce/Puncture |  | Fauna (bite, sting) |  |
| Chemical |  | Gas |  | Fire/Explosion |  | Subcontractor Interaction |  |  |  |  |  |

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| Consider the following mechanisms of injury, “X” where applicable and write into your JHA | | | | | | | | | | | | | | | |
| Contact with |  | Caught in |  | Caught between |  | Cut by |  | Struck against |  | Slip / Trip |  | Fall from |  | Inhalation |  |
| Contact on |  | Contact by |  | Fire / Explosion |  | Crushed by |  | Struck by |  | Strain / Over Exertion |  | Dust |  | Chemical / Gas |  |

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| Consider the following scope of work requirements and “X” where applicable | | | | | | | | | |
| **PPE Requirements** | | **Plant, Equipment and Tools Requirements** | | | | **Isolation, Locks, Tagging, Barricades and Signage** | | **Further Information Required** | |
| Safety Harness |  | Communications |  | Light Vehicle |  | Isolation Tags |  | SWMS, SDS, WI |  |
| Static Line |  | Genset |  | Winch |  | Isolation Locks |  | Manual Handling |  |
| Goggles |  | Hand Tools |  | Extension Leads |  | Barricade (Hard) |  | Instruction Manual |  |
| Face Shield |  | Tool Lanyard |  | Backhoe |  | Flagging |  | TMP |  |
| Hearing Protection |  | Welding Machine |  | Power Source |  | Bunting |  |  |  |
| Sunscreen |  | Compactor |  | Cable Sock |  | Hot Work |  |  |  |
| Gloves |  | Drill |  | Crane |  | Working Above |  | **Permit To Work** | |
| Safety Glasses |  | Grinder |  | EWP |  | Barricade (Hard) |  | Confined space |  |
| Safety Hat |  | Welding Blanket |  | Telehandler |  | Traffic Lights |  | Working at Height |  |
|  |  | Fire Extinguisher |  | Drop Saw |  |  |  | Hot work |  |
|  |  | Shovel |  | Safety Step |  |  |  | Excavation |  |
|  |  | Step Ladder |  | Scaffold |  |  |  | Penetration |  |

| IDENTIFY THE HAZARDS AND CONTROL THE RISKS | | | | | |
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| **Job Steps** | **Potential**  **Hazard/Incident** | **Initial**  **Risk Rating**  **(See Take 5**  **risk matrix)** | **Hold Points Identified** | **Job Step Control Measures** | **Residual**  **Risk Rating (See Take 5**  **risk matrix)** |
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| **New or amended**  Job steps | **Potential**  **Hazard/Incident** | **Initial**  **Risk Rating (See Take 5**  **risk matrix)** | **New or amended**  Job step control measures | **Residual**  **Risk Rating (See Take 5**  **risk matrix)** |
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| **By signing this JHA you are acknowledging you have read and understand and will adhere to this Job Hazard Analysis** | | | | | |
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**ASSIGNED SITE RADIO CHANNELS**

**BELOW ARE THE SITE RADIO CHANNELS CURRENTLY IN USE AT THE COLLIE CBESS PROJECT:**

* **CHANNEL 10 UHF – HANSON BATCH PLANT**
* **CHANNEL 36 UHF – OFFICE / STORES AREA**
* **CHANNEL 37 UHF – GENERAL SITE CHANNEL**
* **CHANNEL 38 UHF – GENERAL ELECTRICAL CHANNEL**
* **CHANNEL 39 UHF – EMERGENCY CHANNEL**

**CLOSED CIRCUIT CHANNEL ALLOCATION – PLEASE UTILISE UHF CHANNELS IF CONTACT IS REQUIRED.**

* **SCEE 1 – FRANNA CRANE**
* **SCEE 2 – CABLE PULL 1**
* **SCEE 3 – CABLE PULL 2**

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| **EMERGENCY RESPONSE PLAN** | | |
| **Emergency Contact Number** | **MEDIC: 0480 721 751** |  |
| **Radio Channel Number** | **CHANNEL: 39 UHF** |  |
|  |  |  |
| Assess the situation and identify any possible hazards (electrical power lines, obstacles).  Call the site medic on radio channel or mobile phone.  Provide the following information to the medic:   * **Where you are (location)** * **What the injury is** * **How many casualties** * **Stay on the phone/radio until the site medic tells you that they have all the information**   Administer first aid (if you are trained).  If possible, send someone to guide the medic to the emergency location.  Advise your supervisor as soon as possible. | | |

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| **EWP EMERGENCY RESCUE PLAN** | |
| **Emergency** | **Proposed Action** |
| Failure of basket controls while elevated | Where the normal basket controls fail the operator will use the auxiliary controls from the platform to lower the basket to the ground. |
| Failure of the operator to be able to operate the EWP functions while elevated due to;   1. Operator incapacitated 2. Basket controls failing to operate | Where the operator is incapable of lowering the basket to the ground the spotter will use the ground controls to lower the basket to the ground. |
| Failure of machine ground controls | Where the lower ground controls fail to allow the basket to be lowered to the ground a basket to basket rescue may be considered:  • A risk assessment **SHALL** be carried and approved by senior management beforehand  • The baskets of both machines must be arranged in a way that both basket doors are next to each other with minimal gap  • Both machines shall be isolated to prevent unintended movement  • The rescuer and the person being rescued (If possible) shall wear fall arrest harnesses with double lanyards  • **DOUBLE HOOK UP** shall be practiced when transferring from one basket to another  • Care must be taken not to overload the rescue EWP during transfer  • The rescue **EWP** shall be lowered to the ground  • Medical assistance shall be provided to the rescued operator if required |
| Operator has fallen from basket and is suspended in the air from the fall | A competent person located at ground level will assess the ability to safely manoeuvre the basket to lower the person to ground. A second EWP on standby can manoeuvre the basket under the suspended person. This situation requires a quick response (max 5 minutes) due to possible suspension trauma. |
| **NOTE:** All spotters or appointed persons in control of the safety on the ground must also hold a high-risk ticket (WP) and be verified competent to operate that make and model of EWP. The Spotter must know how to use the EWP controls.  **NOTE:** The site medic will be notified of any emergency on **0480 721 751** or channel **39 UHF**. | |

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| Manual Handling Techniques/Guide |  | EMERGENCY PREPAREDNESS | |
|  | **Medical Emergency Response** | | **Fire (Electrical)** |
|  | **D**anger | - Check for danger | [Image result for use fire extinguisher](https://www.google.com.au/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&ved=0ahUKEwjc2LLwmvvTAhXLipQKHYnHCKgQjRwIBw&url=https://www.fireonline.com.au/extinguishers&psig=AFQjCNEaodNv4-GDjYqdoqlSXOVb8rVgxA&ust=1495257614194416)**R**escue |
|  | **R**esponse | - Check for response | **A**larm |
|  | **S**end | - Send for help | **C**ontain Fire |
|  | **A**irways | - Check for blocked airway | **E**xtinguish (CO² or ABE Powder) |
|  | **B**reathing | - Check for breathing |  |
|  | **C**PR | - CPR 30 compressions 2 breaths | **P**ull the pin |
|  | **D**efibrillation | - Apply defibrillator (if available) | **A**im at the base of fire |
|  |  |  | **S**queeze the trigger |
|  |  |  | **S**weep base of fire |
|  |  |  |  |
|  | **Electrical Medical Emergency Response** | | **Contact with Electricity Mobile Plant (HV)** |
|  | * Do not touch person in contact | | * Stay calm |
|  | * Warn others to stay clear | | * Stay within mobile plant (if safe to do so) |
|  | * Disconnect power source if possible | | * Avoid touching anything metal within the cab |
|  | * Call emergency contacts immediately | | * Warn other to stay away (minimum 8 meters) |
|  |  | | * Call emergency contacts immediately |
|  |  | |  |
|  |  | |  |
|  | **If not possible to isolate energy** | | **If unsafe to remain in plant** |
|  | * Open LV Rescue Kit | | * Do not touch metal when exiting |
|  | * Place insulated gloves on | | * Try to jump well clear landing with feet together |
|  | * Use insulated LV Hook to break contact between * person and electricity | | * Jump with both feet together until 8 meters away * Do not touch any metal object within 8 meters of plant |
|  |  | |  |
|  | **Medical attention must be sought for all electric shocks** | |  |
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| Risk Matrix |

