



## PCBU / EMPLOYER / COMPANY DETAILS

Name: Dark Knight Engineering / DKE Group

Address: 9 Wenban Place, Wetherill Park NSW 2164

ABN: 77626194992

Phone:

Approved by:

Date:

Works Manager:

Mobile:

## PROJECT DETAILS

Name:

Address:

## CLIENT / PRINCIPAL CONTRACTOR DETAILS

Name:

Date provided to PC:

Contact:

Phone:

## WORK ACTIVITY

Precautions for the use of gas and/or electric welding equipment where there is a risk of fire due to molten metal and sparks.  
 Precautions for the use of angle and wheel grinders where there is a risk of fire due to grinding sparks.  
 Precautions for the use of gas-cutting equipment where there is a risk of fire due to slag, sparks or molten metal from the hot work.

## SCOPE OF WORK COVERED BY THIS SAFE WORK METHOD STATEMENT

The Hot Work SWMS outlines the main hazards and risks associated with the use of gas and/or electric welding equipment in workplaces where there is a risk of fire due to the ignition of flammable material from molten metal and sparks in areas where the work is being carried out.  
 The Hot Work SWMS outlines the main hazards and risks associated with the use of angle and wheel grinders in areas where there is a risk of fire due to the risk of ignition of flammable materials in areas from grinding sparks where the work is being carried out.  
 The Hot Work SWMS outlines the main hazards and risks associated with the use of gas cutting equipment in workplaces where there is a risk of fire due to the ignition of flammable materials from molten metal and slag in areas where the work is being carried out.  
 The SWMS provides details of safety inspections required of the plant before use, and the safety precautions to be observed when using gas and electric equipment in workplaces and on sites where there is a risk of fire due to the use of the equipment.

## GENERAL INSTRUCTIONS FOR SAFE WORK METHOD STATEMENTS

**A safe work method statement (SWMS) must be prepared for any and all high risk construction work to be undertaken prior to the work commencing.** All high risk construction work must be carried out in accordance with this SWMS.

This SWMS must be kept and be available for inspection until the high risk construction work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept.

If a notifiable incident occurs in relation to the high risk construction work in this SWMS, the SWMS must be kept for at least 2 years from the date of the notifiable incident.

The PCBU or employer must ensure, so far as is reasonably practicable, that the information, training and instruction is provided in a way that is readily understandable by any person to whom it is provided.

## SITE SPECIFIC CONSIDERATIONS

**NOTE: This is a generic SWMS.** A generic SWMS may be prepared and used for high risk construction work activities that are carried out on a regular basis; however, the generic SWMS must be reviewed by the person carrying out the work to take into account the hazards and risks for the specific workplace and amend the SWMS as necessary for the site where the work is to be carried out, and complete details such as names and qualifications of workers who will carry out the work. All amendments to the SWMS must conform to regulatory requirements and be recorded on the SWMS. Workers and their health and safety representatives (if any) should be consulted before the generic SWMS is first made available to them and all workers instructed in the SWMS by site-specific inductions or toolbox talks. Details of consultation with workers and instruction in the SWMS must be recorded on the SWMS for that project or site. All workers are required to sign-off on the SWMS before the work is commenced.

## WHAT MEASURES ARE IN PLACE TO ENSURE COMPLIANCE WITH THIS SWMS?

|             |  |             |  |            |  |
|-------------|--|-------------|--|------------|--|
| Supervision |  | Inspections |  | Site audit |  |
|-------------|--|-------------|--|------------|--|

## PERSON RESPONSIBLE FOR MONITORING COMPLIANCE WITH THIS SWMS

|      |  |               |  |
|------|--|---------------|--|
| Name |  | Date Received |  |
|------|--|---------------|--|

## HOW WILL SWMS CONTROL MEASURES BE REVIEWED?

|                                     |  |                                      |  |
|-------------------------------------|--|--------------------------------------|--|
| Compliance with regulations & CoPs? |  | Fit for purpose & adequate for task? |  |
|-------------------------------------|--|--------------------------------------|--|

## PERSON RESPONSIBLE FOR REVIEW OF SWMS CONTROL MEASURES

|      |  |               |  |
|------|--|---------------|--|
| Name |  | Date Received |  |
|------|--|---------------|--|

## HOW WILL CHANGES TO THIS SWMS BE MADE?

|                                   |  |                                   |  |
|-----------------------------------|--|-----------------------------------|--|
| JSA (on site – approval required) |  | Revision (revised SWMS re-issued) |  |
|-----------------------------------|--|-----------------------------------|--|

## HOW WILL CHANGES TO THIS SWMS BE COMMUNICATED TO WORKERS?

|                |  |                   |  |              |  |
|----------------|--|-------------------|--|--------------|--|
| SWMS induction |  | Pre-start meeting |  | Toolbox talk |  |
|----------------|--|-------------------|--|--------------|--|

## HIGH RISK CONSTRUCTION WORK ACTIVITIES (CHECK ANY THAT ARE APPLICABLE TO WORK COVERED BY THIS SWMS)

|                          |   |                          |  |                          |   |
|--------------------------|---|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | A risk of a person falling more than 2 metres (or 3 metres in SA)                     | <input type="checkbox"/> | Demolition of a load-bearing structure   | <input type="checkbox"/> | Work on a telecommunications tower  |
| <input type="checkbox"/> | Work in or near a shaft or trench with an excavated depth over 1.5m; or in a tunnel   | <input type="checkbox"/> | Temporary load-bearing support structures  | <input type="checkbox"/> | Work on or near pressurised gas distribution mains or piping                  |
| <input type="checkbox"/> | Work in an area at a workplace in which there is any movement of powered mobile plant | <input type="checkbox"/> | Work involving the use of explosives   | <input type="checkbox"/> | Work on or near chemical, fuel or refrigerant lines                           |
| <input type="checkbox"/> | The disturbance of or likely disturbance of asbestos                                  | <input type="checkbox"/> | Tilt-up or precast concrete  | <input type="checkbox"/> | Work in an area in which there are artificial extremes of temperature         |
| <input type="checkbox"/> | Work on or near energised electrical installations or services                        | <input type="checkbox"/> | Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor used by traffic other than pedestrians | <input type="checkbox"/> | Work on, under or near water or other liquid that involves a risk of drowning |
| <input type="checkbox"/> | Work carried out in or near a confined space  | <input type="checkbox"/> | Work in an area that may have a contaminated or flammable atmosphere   | <input type="checkbox"/> | Diving work   |

## RISK CONTROL

## Actions to be taken to control risks

|   |  |
|---|--|
| Hierarchy of risk controls (in order of preference) | <i>How will risk controls be implemented?</i>          |
| 1 Elimination (most effective)                      | Eliminate the hazard and the associated risk           |
| 2 Substitution                                      | Substitute the hazard with something safer             |
| 3 Isolation   | Isolate the hazard from people (e.g., barrier, wall)   |
| 4 Engineering means                                 | Physical controls including guards, mechanical devices |
| 5 Administrative controls                           | Work methods or procedures to minimise exposure        |
| 6 PPE (least effective)                             | Provide protective clothing and equipment to workers   |

## What measures are in place to ensure compliance with this SWMS?

## Check

*Check all measures used to ensure compliance with this SWMS*

|   |  |
|---|--|
| Responsible person appointed to monitor compliance with SWMS by workers     |  |
| Site-specific inductions; pre-start meetings and toolbox talks with workers |  |
| SWMS provided to and discussed with workers and signed off                  |  |
| Ongoing workplace supervision by competent personnel                        |  |
| Monitoring of work methods and review of SWMS where necessary               |  |
| SWMS control measures revised if work methods or risks change               |  |

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| PERMITS, ISOLATIONS AND AUTHORISATIONS REQUIRED |  |
|---|--|
|   |  |
|   |  |
|   |  |
|   |  |

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## SAFETY EQUIPMENT REQUIRED

|                                      |         |   |                 |                        |
|--------------------------------------|---------|---|-----------------|------------------------|
| Barricading, traffic control devices | Signage | Fall prevention (safety harness, lanyard) | Traffic control | Other (specify below): |
|                                      |         |   |                 |                        |

## PERSONAL PROTECTIVE CLOTHING AND EQUIPMENT (PPE)

Required PPE is highlighted in red with green check. Optional PPE is highlighted in blue. Ensure all workers have required PPE before any work requiring the PPE has commenced.



## WORKER INSTRUCTION &amp; SIGN OFF

All workers must sign below before commencing work covered by this SWMS: I have been consulted, instructed in and fully understand the content of this SWMS

| Worker's name | Signature | Date | Worker's name | Signature | Date |
|---------------|-----------|------|---------------|-----------|------|
|               |           |      |               |           |      |
|               |           |      |               |           |      |
|               |           |      |               |           |      |
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|               |           |      |               |           |      |

## REVIEWS

| Review No. | 01 | 02 | 03 | 04 | 05 | 06 |
|------------|----|----|----|----|----|----|
| Name       |    |    |    |    |    |    |
| Signature  |    |    |    |    |    |    |
| Date       |    |    |    |    |    |    |

| Job activity            | Hazards and associated risks     | How will the hazards and the risks be controlled?   |
|-------------------------|----------------------------------|---|
| Inductions and training | Untrained workers                | <p>All persons working on a construction site must hold a General Construction Induction (GCI) card.</p> <p>Carry out site-specific inductions for all workers.</p> <p>All workers must be competent in the tasks carried out.</p> <p>Vehicles, plant and equipment must only be operated by licensed or competent persons.</p>   |
| Site security           | Unauthorised entry to site       | <p>Provide security fence, safety barricades, etc., around work site, and post warning signs at entrances to site.</p> <p>All plant, materials and tools must be inside barricaded areas.</p> <p>Site must be secured from entry when unattended.</p>   |
| Safety of other persons | Personal injury                  | <p>Provide safe access for others past work site. Keep pedestrian paths clear of obstacles, trip or slip hazards, and holes, etc., on footpath.</p> <p>Provide welding screens or similar protection to prevent sparks or slag, etc., from affecting persons in neighbouring areas to where hot work is carried out.</p> <p>Ensure that scaffolds are designed to withstand any wind loading placed on containments where hot work is carried out above ground.</p> |
| High risk work licenses | Unauthorised or unsafe operation | <p>Only those persons who hold the appropriate Class of licence are to carry out high risk work, including dogging and rigging work, crane and hoist operation, and forklift operation.</p>   |
| Electrical hazards      | Electrocution                    | <p>All electrical work will be carried out only by licensed or registered electrical workers.</p> <p>Ensure that safety switch is provided on switchboard, and check operation before connecting leads to board.</p>  |

| Job activity           | Hazards and associated risks   | How will the hazards and the risks be controlled?  |
|------------------------|--------------------------------|--|
|                        | Electrical tools and equipment | <p>All electric tools and equipment will be inspected, tested and tagged every 3 months and before use on construction work.</p> <p>Keep electric leads off ground to protect from damage.</p> <p>Connect electrical equipment to a protected outlet.</p> <p>Inspect tools and check operation of controls daily before use. Faulty electric tools will not be used.</p>                             |
| Hazardous chemicals    | Hazardous exposure             | <p>A current Safety Data Sheet must be available for all hazardous chemicals used on site.</p> <p>Ensure good ventilation in areas where volatile chemicals are stored, handled or used.</p> <p>Avoid contact with skin and eyes. Wear hand and eye protection.</p>  |
|                        | Fire or explosion              | <p>Keep flammable chemicals away from heat and ignition sources (including grinding sparks and cutting of metal).</p> <p>Remove flammable materials away from work area where possible. Cover with flame-resistant material where it is not reasonably practicable to remove the materials from the area.</p> <p>Provide suitable fire extinguisher where flammable liquids are stored and used.</p> |
|                        | Environmental risk             | <p>Keep containers of chemicals closed at all times when not in use.</p> <p>Do not allow spills or leaks to pollute the environment.</p>   |
| Hazardous manual tasks | Strains, personal injury       | <p>Provide sufficient personnel or mechanical aids to handle and move large, heavy or awkward loads.</p> <p>Provide safe means of transporting and moving loads on site to minimise manual movement of heavy items</p> <p>Provide manual handling training to all persons.</p>   |
| Fire prevention        | Risk of fire                   | <p>Provide appropriate screens around welding, cutting and grinding processes.</p> <p>Ensure all flammable material is removed or covered before starting hot work.</p> <p>Strip or remove flammable or combustible paints and coatings from surfaces which will be subjected to heat during work process. Sweep and wash or vacuum area to remove flammable dusts, lint, etc.</p>                   |

| Job activity     | Hazards and associated risks       | How will the hazards and the risks be controlled?   |
|------------------|------------------------------------|---|
|                  | Fire control                       | <p>Provide appropriate fully-charged fire extinguishers and fire blankets in work area.</p> <p>Ensure that all persons in work area and adjacent areas are competent in the safe selection and use of firefighting equipment and emergency procedures.</p> <p>Ensure adequate exit and escape routes to eliminate risk of persons being trapped</p>   |
| Risk assessment  | Hot Work Permit                    | <p>A Hot Work Risk Assessment must be carried out and a Hot Work Permit issued for work that may involve a risk of fire or explosion due to heat, flames, sparks, etc.</p> <p>The Hot Work Permit must be approved by management of the work area before the work is commenced.</p> <p>All persons involved in hot work or working in areas where hot work is to be carried out must be instructed in safe procedures for work and emergency procedures.</p> <p>All work must be carried out in accordance with the Permit.</p> |
| Electric welding | Exposure to welding rays           | <p>Exposure to arc flash can cause serious injury to eyes and severe burns to unprotected skin.</p> <p>Wear eye and body protection designed for electric welding. Lens filters in welding helmets must be appropriate for the work carried out.</p>  |
|                  | Burns                              | <p>Specialised welders clothing should be worn by persons carrying out production or fabrication work. Cotton drill or woollen clothing should be worn when welding – do not wear synthetics.</p> <p>Wear split leather jacket and/or apron, gauntlets and spats.</p>   |
|                  | Hazardous atmospheric contaminants | <p>Welding of some metals (aluminium, zinc, galvanised steel, etc.), will release harmful fumes.</p> <p>Provide local fume extraction or exhaust ventilation to prevent remove smoke and fumes from welding area. Wear P2 dust/mist/fume face mask or supplied air respirator if welding in confined areas.</p>   |
|                  | Heat stress                        | <p>Provide adequate natural or mechanical ventilation in work areas. Provide cooling ventilation to reduce temperature of area where other ventilation cannot maintain safe temperatures in workplaces.</p> <p>Provide adequate supply of cool water for workers.</p> <p>Apply work-rest regimes in extreme conditions</p>  |

| Job activity            | Hazards and associated risks     | How will the hazards and the risks be controlled?  |
|-------------------------|----------------------------------|--|
| Use of angle grinders   | Inspection                       | <p>Check casing for damage, cracks and missing screws; inspect lead and plug for damage. Current test tag must be attached.</p> <p>Inspect disc for damage and ensure that it is suitable for the work to be carried out.</p> <p>Guard must be fitted over grinding disc.</p>  |
|                         | Operation                        | <p>Always grind so that sparks are directed away from the body and away from other persons.</p> <p>Wear safety glasses and face shield, heavy gloves, and hearing protection.</p> <p>Wear respirator if harmful dusts will be generated during grinding.</p>   |
| Use of gas cutting gear | Fire and explosion risk          | <p>Blowback arrestors must be fitted to all fuel gas and oxygen hoses and regulators. Inspect hoses for burns or damage.</p> <p>Ensure that all flammable materials are removed from area where possible or covered to protect from sparks and slag.</p> <p>Ensure that all pipes, containers, etc., that have contained flammable gas or liquids are purged and clear of flammable residue, gas, or vapours before cutting.</p> |
| Carrying out hot work   | Injury to other persons          | Prevent unauthorised entry into and keep other persons clear of areas where cutting work is being carried out.   |
|                         | Harmful atmosphere, asphyxiation | <p>Provide and use appropriate respiratory protection for harmful contaminants.</p> <p>Evacuate area if contaminant level is excessive and ventilate before re-entry.</p>  |
|                         | Fire and explosion risk          | <p>Monitor flammable vapour levels by use of suitable gas monitoring equipment.</p> <p>Provide mechanical ventilation to provide fresh air supply into work area. Do not use oxygen to ventilate or purge area.</p> <p>Cease hot work if flammable gas or vapour detected above 10% of LEL.</p>  |



| Job activity                     | Hazards and associated risks      | How will the hazards and the risks be controlled?  |
|----------------------------------|-----------------------------------|--|
|                                  | Protective clothing and PPE       | <p>Workers carrying out how work must wear appropriate PPE to protect them from the specific hazards encountered during work.</p> <p>Wear safety glasses, face shield, gloves, and body and foot protection. Wear appropriate respiratory protection when hazardous fumes are release during welding.</p> <p>Clothing, footwear and gloves, etc., must be non-flammable – do not use synthetics.</p> |
| Monitoring of work area          | Risk of fire                      | <p>A dedicated observer must observe work area for at least 30 minutes after hot work process have been completed.</p> <p>Ensure that suitable firefighting appliances are available, and that observer is competent in the use of firefighting equipment and procedures to follow if a fire or smoke is observed.</p>   |
| Site clean-up and waste disposal | Slips, trips and falls of persons | <p>Ensure that all scrap and waste material is removed and that area is clear of obstacles.</p> <p>Check safety of area before removing barricading.</p>   |

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