

Cedar Creek Electrical Safe Work Method Statement 031 – Revision 1 / Date: 01/12/2019

SWMS 031

|  | Office Location: 269 Mulhollands Rd, Thirlmere NSW 2574 | I approve the use of this Safe Work Method Statement: Name: Anthony Silm, Director Signature:  | | Date: 01/12/2019 | |
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| Description of Activity | Substation Connection | Work Site/Project Depot | | | |
| Critical Steps in this Activity | Potential Hazards | Risk Levels | Safety Controls | Risk Residual Levels | Responsibilities |
| Carry out hazard assessment checklist. | N/A | | | | |
| Check, inspect and ensure correct functioning of all safety equipment and rescue equipment. | Possible damage to equipment. Equipment not operating. | 1 | Ensure all equipment is in good condition. | 3 | Site Supervisor |
| Ensure electrical work has been completed and installation safe to energise. | Work not completed thus exposing live parts if energised. | 1 | Visually checking for unterminated cables. | 3 | Site Supervisor |
| Ensure you are suitably dressed to carry out work, e.g. long-sleeved shirt and long pants or overalls, safety helmet, safety glasses and suitable footwear. | Exposure to contact with “live” parts. Exposure to flash burns in the case of a fault. | 1 1 | Ensure correct clothing is worn and maintained in a good condition. | 3 | Site Supervisor |
| Locate the point of supply. | Ensure point of supply is accessible and safe to work on. | 2 | Install barriers. | 3 | Site Supervisor |
| Identify voltage at substation | Electric shock | 1 | To maintain safe work distances (700mm from high voltage & 500mm from low voltage) | 3 | Site Supervisor |
| Sign access permit with supply authority inspector | N/A | | | | |

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| Advise personnel on site that electrical supply is about to be connected. | Inadvertent contact with "live" parts as cables are energised. | 1 | Ensure everyone understands that parts of the electrical installation will become energised. Place barriers around areas which are to be energised, if deemed necessary. | 3 | Site Supervisor |
| Check that no alternate electrical supply has been connected. | Electric shock from alternate supply. | 1 | Test for electrical supply at main switchboard. | 3 | Site Supervisor |
| Place rubber mat at point of supply and ensure that all work at the point of supply is carried out whilst standing on the mat. | Possible touch potentials if fault in cables in vicinity of work site occurs. | 1 | Always ensure that all work is carried out whilst standing on the mat. | 3 | Site Supervisor |
| Prove metal surround of switchboard is not "live". | Electric Shock | 1 | Carry out correct tests using temporary earth. | 3 | Site Supervisor |
| Remove main earthing conductor from neutral link and prove continuity of main earthing conductor. | High resistance earth. | 2 | Ensure continuity meets the requirements of the Wiring Rules. | 3 | Site Supervisor |
| Remove the service fuse carriers and verify that the nominated underground service cable active conductors are connected into the service fuse terminals. | Cables not terminated correctly. | 3 | Ensure correct termination of cables. | 3 | Site Supervisor |
| Using test lamps prove the underground service mains conductors are not "live". | Electric shock. | 1 | Treat as "live" until proven de-energised. | 3 | Site Supervisor |
| Remove service mains neutral conductor from neutral link and apply temporary insulation to bare end. | N/A | | | | |
| At the point of supply uncover or open to expose point of supply connections. | Opening or uncovering point of supply may expose bare "live" equipment. | 1 | Treat all equipment as "live" until proven de-energised. Stand on rubber insulating mats and wear correct safety equipment. | 3 | Site Supervisor |
| Wearing correct safety equipment, ensure all existing terminations are tight. | Connections coming loose whilst working on point of supply. | 2 | Ensure all existing conductors are terminated correctly and terminations are tight. | 3 | Site Supervisor |
| | Conductors moving out of terminations whilst working on point of supply. | 1 | | | |

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| Using test lamps identify the distribution supply active and neutrals. If distribution system is not energised discontinue work and notify supply authority. | Electric shock. No supply unable to complete connections. | 1 3 | Wear correct safety equipment. Discontinue work until supply is available. | 3 | Site Supervisor |
| Locate the underground service cables for the nominated installation. | Energised conductors. | 1 | Prove de-energised. | 3 | Site Supervisor |
| Using an insulation resistance tester (megger) test insulation resistance of all underground service mains conductors. | Capacitance of conductors. | 3 | Short conductors to earth after tests have been completed. | 3 | Site Supervisor |
| Prove underground service mains conductors belong to nominated installation. If leaving point of supply replace cover. | Energising incorrect underground service conductors. | 1 | Carry out tests to ensure correct conductors. | 3 | Site Supervisor |
| Connect the underground service cable to the distribution system (neutral first) using approved type connectors. | Electric shock. | 1 | Stand on insulating mat and wear correct safety equipment. | 3 | Site Supervisor |
| Replace cover on point of supply. | Electric shock to other people. Damage to conductors within point of supply. | 1 3 | Secure cover in place. Ensure no damage is occurring to conductors when replacing cover. | 3 | Site Supervisor |
| At the switchboard prove metal surround of switchboard is not "live". | Electric shock from switchboard becoming "live" now supply is connected. | 1 | Carry out tests using temporary earth. | 3 | Site Supervisor |
| Prove connection and polarity of underground service mains using standard lamp test. | Electric shock. Incorrect polarity could lead fatal electric shocks received by others. | 1 | Using and wear correct safety equipment. Ensure correct polarity. | 3 | Site Supervisor |
| Replace main earthing conductor and service main neutral conductor in neutral links. | Transferred earth potential. | 3 | Wear correct safety equipment. | 3 | Site Supervisor |
| Replace service fuse carriers. (Cartridges will need to be removed if no metering is installed.) | Explosion from shorting of phases when installing fuse carriers. | 2 | Carry out short circuit tests prior to inserting each individual service fuse carrier. | 3 | Site Supervisor |
| Check phase rotation (if applicable). | Machinery operating in reverse direction. | 1 | Ensure correct phase rotation and machinery operation. | 3 | Site Supervisor |
| Advice all personnel on site that supply is now connected. | N/A | | | | |
| Complete necessary paperwork. | N/A | | | | |
| Pick up all equipment and leave area tidy. | Environmental issues. | 3 | Ensure the area left is as good a condition as found or better. | 3 | Site Supervisor |

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| Training Required to Complete | Personal Qualifications and Experience | List Codes of Practice, Legislation, Standards which apply to this Activity: |
| 1. Correct training prior to authorisation. | 1. Category 2 authorisation by appropriate Supply Authority. | WHS Act 2011 WHS Regulations 2017 |
| Personnel, Duties and Responsibilities | | Supply Authority's Electrical Safety Rules |
| 1. To ensure correct safety equipment is put into place and used correctly. | | Low voltage electrical work. Electrical work code of practice. |
| 2. Carry out hazard assessment checklist. | | |
| List Plant/Equipment/Personal Protective Equipment required for this Activity: | List Equipment Maintenance Checks required for this Activity: | Engineering Certificates /Permits/Approvals required for this Activity <i>eg road closure, utility shutdown, WorkCover notification, demolition licence.</i> |
| Insulating gloves, safety helmet, safety glasses, long sleeves and long pants, suitable footwear. Insulating Mat. Low voltage rescue kit. All other safety equipment. | Check all equipment prior to use. | Supply Authority Electrical Safety Rules. |

Person(s) Responsible for Supervising/Inspecting Services:

Person(s) responsible for supervising the Services, inspecting and approving work areas, work methods, protective measures, plant equipment and power tools
NB List of qualifications/experience is held on local files

Name: Anthony Silm

Position: Director

Signature:



For list of names and signatures of staff instructed in this SWMS see training records.

Frequency of Review: 3 Months or as required

| Consequence | Probability | | | |
|---|---|---------|----------|---------------|
| | Very Likely | Likely | Unlikely | Very Unlikely |
| Killed or cause permanent disability | Class 1 | Class 1 | Class 1 | Class 2 |
| Long Term illness or serious injury | Class 1 | Class 1 | Class 2 | Class 2 |
| Medical attention and several days off work | Class 1 | Class 2 | Class 2 | Class 3 |
| First Aid treatment | Class 2 | Class 2 | Class 3 | Class 3 |
| Class 1 - High | The hazard has the potential to kill or permanently disable you. | | | |
| Class 2 - Medium | The hazard has the potential to cause serious injury or illness, which would temporarily disable you. | | | |
| Class 3 - Low | The hazard has the potential to cause a minor injury which would not disable you | | | |
| Controls considered to manage risks: Elimination, Substitution, Isolation, Engineering, Administration, Personal Protective Equipment. | | | | |