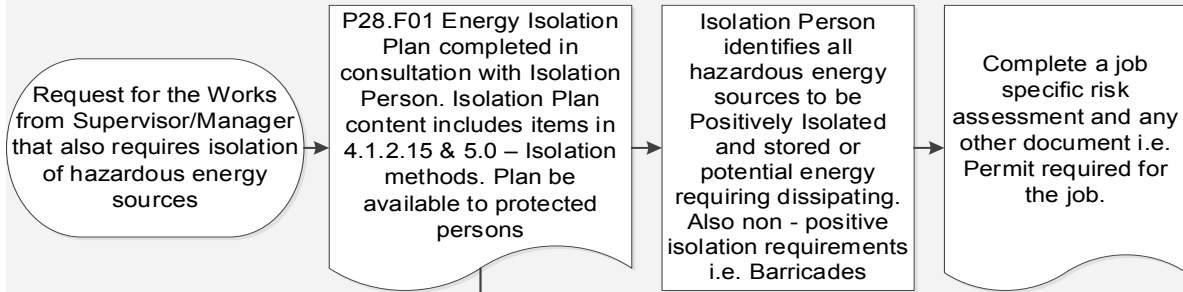


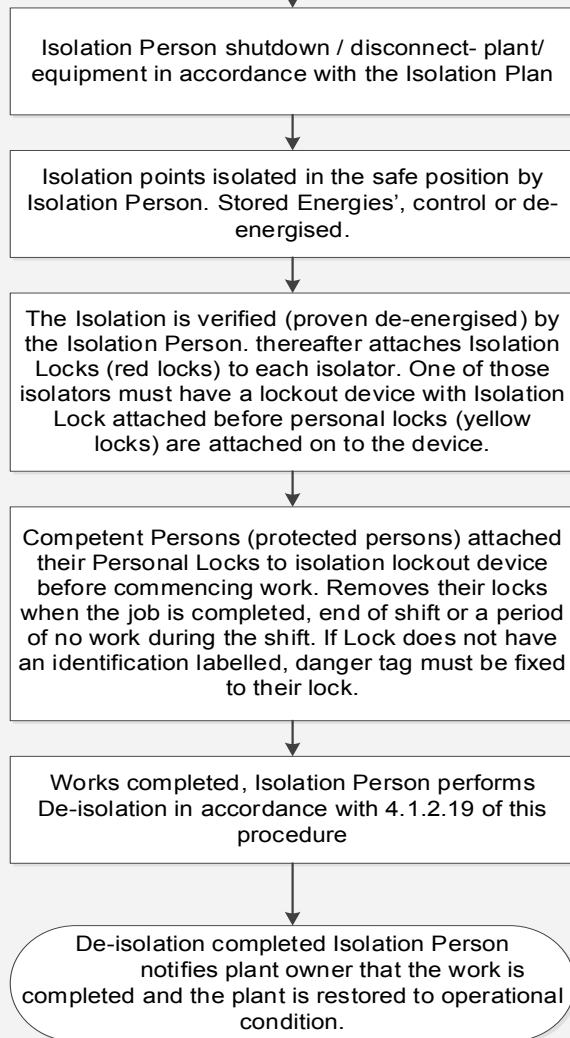
ENERGY ISOLATION & BARRICADING

1.0 SUMMARY / FLOWCHART

IDENTIFICATION OF ISOLATION REQUIREMENTS



APPLICATION OF ISOLATION PROCEDURES



2.0 RESPONSIBILITY

Organisational Level	Health and Safety Responsibilities
Level 1 (<i>General Manager, Group Directors</i>)	Provide adequate resources to ensure that the requirements of this procedure are implemented.
Level 2 (<i>Section Manager, Unit Manager / Unit Co-ordinator, Project Manager</i>)	Ensure the effective implementation of the requirements of this procedure.
Level 3 (<i>Coordinator within a Unit, Team Leader, Supervisor, Ganger or Leading Hand or Operator</i>)	Ensure that all new, second hand, or hired plant has been subjected to a risk assessment prior to acquisition and that any required controls have been established, implemented and monitored.
	Ensure that all workers operating items of plant and equipment are suitably licensed, trained and competent prior to unsupervised use of the plant.
	Ensure that all required inspections, maintenance and cleaning of plant and equipment are undertaken by competent workers and that all identified discrepancies are corrected.
	Ensure that plant and equipment is used for tasks for which it is suitable and operated within the normal limits.
	Ensure that records of plant and equipment inspections, maintenance and cleaning are maintained in accordance with the requirements of P04 Document Control and Safety Records.
	Develop and document Safe Work Instructions for the maintenance, repair and cleaning of plant and equipment.
	Monitor compliance with established procedures and take action to correct non-compliance, when required.
Level 4 (<i>Team Member, Operator Attendant, Trainee, Apprentice</i>)	Ensure that plant and equipment is used for tasks for which it is suitable and operated within the normal limits.
	Ensure that all workers operating items of plant and equipment are suitably licensed, trained and competent prior to unsupervised use of the plant.
Level 5 (<i>Volunteer, Contractor, Other</i>)	Ensure that all workers operating items of plant and equipment are suitably licensed, trained and competent prior to unsupervised use of the plant.
	Ensure that plant and equipment is used for tasks for which it is suitable and operated within the normal limits.

3.0 PURPOSE & SCOPE

3.1 PURPOSE

- 3.1.1 The purpose of this procedure is to ensure all hazardous energy sources related to plant, equipment or structure are made safe so that the unexpected start-up, energisation or release of stored energies that could cause injury does not occur. This procedure does not cover requirements for electrical work on `energised` electrical equipment specified in the NSW WHS Regulation 2011 or for High Voltage Work. This procedure has two parts;
- i. Energy Isolation Procedures
 - ii. Barricading & Tagging Rules

3.2 SCOPE

- 3.2.1 This procedure applies to all workers, contractors and other personnel at workplaces under the management or control of the SCC.

4.0 ENERGY ISOLATION PROCEDURE

4.1 INTRODUCTION

- 4.1.1 Content within this procedure includes general isolation requirements, isolation methods, locks, training and auditing.
- 4.1.2 General Isolation Requirements
- 4.1.2.1 When isolation of plant is required, this procedure should be read in conjunction as necessary with any job specific Isolation plan, risk assessment, permit or project plan.
 - 4.1.2.2 The person responsible for plant maintenance, cleaning or repair should notify all asset controller of the work schedule and duration of the isolation prior to work commencing.
 - 4.1.2.3 All workers required to isolated potential hazardous energy sources at workplaces under the management or control of the SCC must be trained (*refer 7.0- more details*).
 - 4.1.2.4 For some hazardous energy sources i.e. electricity or gas, an Isolation Person will require additional competency e.g. a license or trade certification or be trained and assessed as competent in the isolation of electrical supplied plant to prevent unexpected start-up, energisation of mechanical equipment.
 - 4.1.2.5 Only Isolation Persons are permitted to isolate hazardous energy sources. They must not allow a person to work under isolation (protected person) until all isolation points are identified, isolated in the safe position, verified (proven de-energised) and lockout / tag-out.
 - 4.1.2.6 Proposed protected persons must be authorised and have their Personal Lock (Red lock) attached to the `designated`

- Isolation lockout device with the Isolation Lock (Yellow lock) attached. (refer 5.0 - more details)
- 4.1.2.7 An Isolation Person must be familiar with the plant they intend to isolate. Also ensure all hazardous energy isolators connected to the plant are identified and positively isolated in the `safe position` before work commences.
- 4.1.2.8 Isolating hazardous energy sources in the `safe position` has two meanings, either in the Off- Position (*in most circumstances*) or in the ON- Position when for example you need to ensure the isolator is not accidentally switched off i.e. for ventilation purposes in a confined space.
- 4.1.2.9 All hazardous energy sources likely to re-activate the plant and put workers at risk of injury must be identified, those energy sources include;
- a) Electricity (mains, solar and by generator)
 - b) Fuels
 - c) Heat
 - d) Steam / Compressed air
 - e) Fluids under pressure (such as water, hydraulic oil)
 - f) Stored energy – e.g. Spring
 - g) Gravity
 - h) Radiation
- 4.1.2.10 Process to `positively isolate` hazardous energy;
- a) Develop and implement an Isolation plan.
 - b) Ensure `protected persons` have access to the Isolation Plan.
 - c) Identify and isolate the isolation points in the `safe position` with an Isolation Lock on each isolator.
 - d) With `Stored Energies`, control or de- energise e.g.. install ground wires, relieve trapped pressure, block or brace parts that could fall because of gravity etc.
 - e) Lockout / tag –out.
 - f) Verify the isolation (proven de-energised).
***Note:** Testing of the equipment maybe required before De-Isolate, thereafter ensure De-Isolate is carry out on completion of the job.*
- 4.1.2.11 Proven de-energised devices include; metres, gauge indicators, test by "trying" to re-activate the plant.
- 4.1.2.12 Isolation lockout devices must be suitable for the type of energy being isolated, examples include;
- a) **Electrical** - hasps, circuit breaker, universal wall switch lockouts, locks
 - b) **Mechanical** - hasps, disc brake locks, rotating gate valve lockouts, chains, fluids & ball, butterfly and gas rotating gate valve
 - c) **Gases** - lockouts, remove a valve and blank or cap open end of piping.

NOTE: All isolation locks, lockout devices must meet equivalent i.e. Australian Standard 4145.4 2002

- 4.1.2.13 Risk Control - Risks associated with the isolation of hazardous energy should be eliminated so far as reasonably practicable. The risk assessment must clearly prescribe the control measures to be used for the isolation.
- 4.1.2.14 Except for `Short Term Isolation - Protected Person Working Alone`, an Isolation Plan must be completed that includes a list of those isolators being isolated. (*refer 5.1.9 -more details*).
- 4.1.2.15 An Isolation Plan should include;
- a) Job location, date/s, description of work
 - b) Name of the Isolation Person(s) and those persons working under isolation (protected persons).
 - c) Name of the contact person in the event of an emergency.
 - d) List of all hazardous energy isolators requiring Isolation i.e. code identifiers.
 - e) Sequence of Shut down/ disconnection of supply to the plant.
 - f) Method used to isolate i.e. Extended Isolation
 - g) Method used to de-energise stored energies e.g., earthing or grounding electrical charge or bleeding down hydraulic lines.
 - h) Process to validate the isolation i.e. Test by "trying" to re-activate the plant without exposing the tester or others to risks.
 - i) De- isolation details for returning the plant back into service.
 - j) Any other specific details associated with the isolation e.g. Barricade the area off.
- 4.1.2.16 Isolation Boundaries - Work involving plant with several connecting hazardous energy sources, the Isolation Person must identify and communicate those energy sources being isolated to those persons working under isolation (protected persons).
- 4.1.2.17 Isolation and Personal Locks
- a) Master brand 410 locks should be used.
 - b) ISOLATION LOCK (Yellow locks) used only to lockout isolators must be attached directly to each isolator. A suitable lockout device must be attached to one of those isolators for Personal Locks (Red lock) to be affixed too.
 - c) Purpose of the Isolation Lock (Yellow locks) is to inform workers intending to carry out work on plant with connecting hazardous energies that the plant's isolators

have been isolated, verified (proven de-energised) and its now safe to attach Personal Locks (Red lock) on the provided lockout device before commencing work.

- d) PERSONAL LOCKS (Red lock) must be used by workers intending to work under isolation (protected person). They must attach their lock to the provided lock-out device that has a Yellow lock attached (refer 6.0 -more details).
- e) Purpose of the Personal Lock (Red lock) is to distinguish it from the Isolation Lock (Yellow lock) also informs others that one or more persons are carrying out work on plant with hazardous energy sources that is currently isolated.

4.1.2.18 When isolating a hazardous energy source, where possible two Isolation points should be positively isolated.

4.1.2.19 De-Isolation - returning the plant back into service;

- a) The Isolation Person must perform de-isolation on completion of the job.
- b) It is critical that de-isolation is only carried out after the Isolation Person validates;
 - i. The job has been completed in accordance with the scope of works.
 - ii. Checking the plant, equipment or process for operational integrity.
 - iii. Remove from the work area all unwanted materials.
 - iv. All hatches are closed and locked if required.
 - v. All Personal Locks (Red locks) have been removed from the isolator's lockout device. Where a protected person has left their Personal Lock on the lockout device and left the site (*refer 6.1.6.5 -more details*).
 - vi. After deeming it safe, commence de- isolated by removing all Isolation locks (Yellow locks), put the isolators into the "Off" or "Neutral" position.
 - vii. Complete all related documentation.
 - viii. Notified the person responsible for the plant that the work is completed and the plant is restored to operational condition.

5.0 ISOLATON METHODS

5.1 SHORT TERM ISOLATION

- 5.1.1 Short Term Isolation has procedure variations in **5.2** - Protected Person Working Alone and **5.3** - Isolation of Mobile Plant. Other than those specified variations, the remainder of the procedural requirements outline in **5.1- SHORT TERM ISOLATION** apply.
- 5.1.2 Short Term Isolation is used when work is less than one shift, isolation of less than three isolators and more than one person being a (protected person).

- 5.1.3 The Isolation Person is responsible for the isolation.
- 5.1.4 Where a change-over of the Isolation Person is required a debriefing between the Isolation Persons should be undertaken. The name of the new Isolation Person must be recorded in Isolation plan and any other related document that has recorded the first Isolation Persons name.
- 5.1.5 All (protected persons) working under isolation must attached their lock (Red lock) to one of the isolators lockout device as specified in 4.1.2.5.
- 5.1.6 A danger tag may be used in place of a Personal Lock (Red lock) ONLY when a Personal Lock cannot be physically fixed to a lockout device. In those circumstances the danger tag must record the person's name, contact details and the SCC- Group they belong to i.e. Shoalhaven Water
- 5.1.7 In some cases a job may not be continuous (*a period of no work or work required elsewhere*) during the shift, where this occurs all Personal Locks (Red lock) must be removed from the lockout device until the work resumes. The Isolation Lock (Yellow lock) should remain to protect the integrity of the isolation, a (Caution – Out of Service) tag should be attached to the Isolation lockout device explaining the circumstances.
- 5.1.8 Returning the plant back into service - De-Isolation, must be completed by the Isolation Person in accordance to 4.1.2.18. when the job is completed.
- 5.1.9 For `Short Term Isolation – Protected Person Working Alone` ONLY, the details of the Isolation plan maybe recorded in the job's risk assessment. Those details must be available for inspection by all protected persons.
- 5.1.10 The person in charge of the works can elect to isolate under `Extended Isolation` instead of Short Term Isolation.

5.2 SHORT TERM ISOLATION - Protected Person Working Alone

- 5.2.1 In these cases the Isolation Person can attached their Personal Lock (Red lock) directly to the isolator or the lockout device where the latter is not possible without the need to attach an Isolation Lock – (Yellow lock). Also they must attached a danger tag to their Personal Lock with their name, contact details, SCC- Group they belong to e.g. Shoalhaven Water and prescribe the words-`*person working alone under isolation*` . All other responsibility of the Isolation Person still apply i.e. verifying the Isolation (proven de-energised).

5.3 SHORT TERM ISOLATION - Mobile Plant Isolation

- 5.3.1 This method of isolation is specific to maintenance work associated with mobile plant by i.e. Mechanical Services at SCC Depots /other sites.

- 5.3.2 The mobile plant's main isolation source is the ignition start-up/shut-down switch 'Key' and/or the plants immobiliser keypad. The mobile plant is positively isolated by the removal and security of that 'Key' and/or activating the plants immobiliser keypad to prevent unauthorised start-ups of mobile plant whilst work is in progress or when the plant is left unattended.
- 5.3.3 Isolation and Personal Locks in these cases are not required unless other parts of the mobile plant has hazardous energy sources requiring different type of positive isolation methods.
- 5.3.4 The start-up /shut-down 'Key' must be kept secured by e.g. a locked box located in a safe location.
- 5.3.5 In circumstances where trucks fitted with mobile cranes and the crane is used specifically for rescue purposes via the emergency rescue anchor point located on the cranes jib i.e. for confined space work. The positive Isolation method outlined in 5.3 will also apply.

5.4 EXTENDED ISOLATION

- 5.4.1 Extended Isolation involves work that extend beyond one shift, isolation of three or more isolators and generally involves several workers working under isolation (protected persons).
 - 5.4.2 Extended Isolation, the requirements in 5.1.3 to 5.1.5 and 5.1.8 (Short Term Isolation) also apply.
 - 5.4.3 Persons working under isolation (protected persons) must have their personal lock attached to the isolation lockout device.
 - 5.4.4 For Extended Isolation a P28.F01 Isolation Plan must be completed and available for inspection by all (protected persons).
- Note:** ONLY – where a related document i.e. project plan or permit already prescribes the details (in 4.1.2.14 - Isolation Plan) a P28.F01 Isolation Plan is not required, however that document must be available for inspection by all (protected persons)
- 5.4.5 For work continuing beyond one shift, those protected persons not working the next shift must remove their Personal Lock (Red lock) before leaving the job.
 - 5.4.6 Where the job discontinues at the end of a shift and will not resume until the following day, all protected persons must remove their Personal Lock (Red lock) before leaving the job. The Isolation Locks (Yellow locks) may remain on the isolators with a warning tag attached to each lock prescribing the name, contact details of the Isolation Person and prescribe the reason for the attached warning tag. The Isolation person must inform their immediate supervisor of the status of the isolation before leaving the job.

Table 1 – Isolation Plan

Isolation Plan (P28.F01) to be completed	Short term Isolation	Extended Isolation
	✓	✓

Isolation Plan (P28.F01) not required to be completed – Alternative requirements.	ONLY- Short Term Isolation – Isolation person working alone. 4.1.2.15 details prescribed in job specific risk assessment.	ONLY- Extended Isolation- where 4.1.2.15 details are already prescribed in a related document i.e. project plan, permit.
	✓	✓

Table 2 – Isolation & Competent Persons, functions

ISOLATION PERSON	Be trained as per 7.1 of this procedure	Use either Short Term or Extended Isolation methods	Positively isolate & de-isolate as per 4.1.2.10 & 4.1.2.18	Ensure Isolation locks (Yellow lock) are affixed to individual isolators as per 4.1.2.16	Ensure their personal lock (Red lock) is fixed to lockout device IF also working as a protected person
	✓	✓	✓	✓	✓
COMPETENT PERSON (Protected Person)	Be trained as per 7.1.3 of this procedure	Comply with the directions of the Isolation Person.	Comply with Personal lock rules within 6.0 of this procedure	ONLY attached your Personal Lock (Red lock) (or tag - <i>Short Term Isolation only</i>) to an isolator lockout device that has an Isolation lock attached.	Remove your lock (Red lock) after completing work, end of shift or periods of no work as per 5.1.7
	✓	✓	✓	✓	✓

6.0 LOCK RULES

6.1 PERSONAL LOCKS

- 6.1.1 Personal Locks (Red lock) used by persons working under isolation (protected person)
- 6.1.2 Personal Locks (Red lock) can only be attached to a lockout device that has an Isolation Lock fixed to it. Only exemption (see 5.2.1)
- 6.1.3 Each person working on the plant should have their own PERSONAL LOCK and key. There should be no duplicate key available for any lock on site, the master or duplicate key can be securely kept off site for use in the event of an emergency.
- 6.1.4 Where a person has no (Personal Lock) a Group `loan` lock can be used (Red lock) it must be labelled on those locks` Group e.g. Shoalhaven Water Loan (Personal Lock)`. The person using a `loan` lock then must attach a Danger Tag to that lock prescribing their name, contact details and the SCC- Group they belong to i.e. Shoalhaven Water.

- 6.1.5 Workers Personal Locks should be labelled or tagged with the owners name contact details and the SCC- Group they belong to e.g. Shoalhaven Water
- 6.1.6 Personal Lock (Red lock) **owner must;**
 - 6.1.6.1 Always attach your own lock.
 - 6.1.6.2 Where Personal Locks or keys are lost report it to your Isolation Person or Supervisor.
 - 6.1.6.3 On completion of the work or leaving the site remove your Personal Lock.
 - 6.1.6.4 Where a Personal Lock is not labelled with the owners details, a danger tag must be attached to the lock with your name, contact details and the SCC Group you belong too e.g. Shoalhaven Water
 - 6.1.6.5 Where a protected person has left their Personal Lock (Red lock) on the lockout device and has left the site, the Isolation Person can remove their lock after contacting the person and the person is not able to return to the site to remove their lock prior to the end of shift or when de-isolation is required. An investigation will follow to determine the reasons for the protected person leaving the site without removing their lock.
- 6.1.7 Personal Lock (Red lock) owner **must not;**
 - 6.1.7.1 Leave your key in the lock.
 - 6.1.7.2 Attach a lock to another lock.
 - 6.1.7.3 De-face or paint Personal Locks
 - 6.1.7.4 Depend on someone else`s Personal Lock for your own personal protection.
 - 6.1.7.5 Lend your Personal Lock to another person.
 - 6.1.7.6 Remove another person`s lock – except (refer 6.1.5 – more details)

6.2 ISOLATION LOCKS

- 6.2.1 Isolation Locks (Yellow lock) are used to positively isolate individual isolators
- 6.2.2 Isolation Locks (Yellow lock) must be attached to the individual isolators. One of those Isolation Locks will be fixed to a lockout device before people can work under isolation (protected person).
- 6.2.3 The only exemption (see 5.2 more details)
- 6.2.4 Isolation Locks owner (Isolation Person) **must;**
 - 6.2.4.1 Where a master key/s exists ,it must be securely kept off site e.g. at SCC work depots
 - 6.2.4.2 Ensure locks are attached and removed by them.
 - 6.2.4.3 They are used to secure the isolators in the safe (isolation) position.

- 6.2.4.4 Each Isolation Locks label shows your name, contact details and SCC- Group you belong too e.g. Shoalhaven Water.
- 6.2.4.5 Where Isolation keys or locks are lost report it to your Supervisor.
- 6.2.5 Isolation Locks owner (Isolation Person) **must not**;
 - 6.2.5.1 Attach an Isolation Lock to another lock.
 - 6.2.5.2 Use an Isolation Lock for personal protection.
 - 6.2.5.3 Leave an Isolation lock keys in a locks.
 - 6.2.5.4 De-face or paint Isolation Locks.

7.0 TRAINING

7.1 ISOLATION PERSON AND PROTECTED PERSON TRAINING

- 7.1.1 All Isolation Persons who are required to isolate potential hazardous energy sources at workplaces under the management or control of SCC must be trained / assessed as competent in SCC P28 Energy Isolation & Barricading Procedure, thereafter be deemed as an Isolation Person. In some cases additional competencies are required as outlined in 4.1.2.4
- 7.1.2 Training must be in accordance with P09 Safety Training Procedure including section 4.7 of that procedure –verification of competency every 3 years.
 - 7.1.2.1 Training maybe either on-the- job or off- the- job utilizing SCC provided training instruments and must be recorded in TRAAD.
- 7.1.3 All workers who are required to work under isolation (Competent Person) associated with hazardous energy sources at workplaces under the management or control of SCC must be trained and deemed competent to the level of their related responsibility in SCC P28 Energy Isolation & Barricading Procedure.
 - 7.1.3.1 Training must be in accordance with P09 Safety Training Procedure including 4.7 of that procedure –verification of competency every 5 years.
 - 7.1.3.2 On-the- job training will be used utilizing councils Isolation SWI and P09.F01 Coaching and Monitoring, and Induction for Safe Work Instruction form must be recorded in TRAAD.

8.0 BARRICADING & TAGGING RULES

8.1 INTRODUCTION - BARRICADING

- 8.1.1 These Barricading and Tagging rules are designed to provide protection to people and equipment from hazards and other nearby tasks.

- 8.1.2 All workers, contractors and other personnel at workplaces under the management or control of the SCC must comply with the rules prescribed in this procedure.
- 8.1.3 Persons requiring a need for barricading an area are responsible for notifying the appropriate persons of the intent to set-up a barricade, select the correct type of barricade for the hazards, safely erect thereafter dismantle the barricade and supervise the access to the barricaded area.
- 8.1.4 The barricading rules prescribed in this procedures relate to temporary barricading only.

8.2 PURPOSE OF A BARRICADE

- 8.2.1 To restrict access to a defined area containing hazards and risks i.e. a hole in the ground.
- 8.2.2 To provide protection to workers within the defined area from e.g. being struck by a vehicle whilst the work activity is in progress.
- 8.2.3 Temporary separation of pedestrians from the work activity.

8.3 DANGER TAPE BARRICADE

- 8.3.1 Danger tape should not be used to barricade high risk activities i.e. construction work, unless it is not possible or practicable to use other types of barricades (prescribed below) and should be restricted for short periods in an emergency e.g. around fallen tree limbs or access to gross pollution traps in conjunction with a support vehicle and spotter.

8.4 BARICADING ON OR ADJACENT TO RMS ROADS

- 8.4.1 For construction work, for example roadworks, on or adjacent to RMS roads, only approved RMS barricading types should be used i.e. safety concrete barriers.

8.5 BARRICADING - OTHER THAN ON OR ADJACENT TO RMS ROADS

- 8.5.1 SHORT TERM WORK 3 DAYS OR LESS for construction / maintenance work i.e. curb and guttering, acceptable barricading for excavations of a maximum depth of 200 mm and (where applicable) on low volume 60km or less roads;
 - 8.5.1.1 Barrier boards with one end angled towards the ground with a sufficient amount of sandbags affixed for prevailing weather conditions at 90 degrees to the longitudinal direction of the road. Where necessary each barrier board will also be fixed with a star picket and end cap at the high end of the barrier board pegged into the ground.

- 8.5.1.2 Maximum spacing between barriers boards of 5 m, minimum two traffic warning lamps fixed to the barrier boards at both ends of the barricaded section. Outside of those end barricade boards, one or more interlocking water barricades be placed in the same direction as the barrier boards. Also, advance warning signs and any required delineation (traffic cones) be erected as determined by the risk assessment and or TCP.
- 8.5.1.3 Where there is a pedestrian thoroughfare on the nature strip along the outside of the excavation, a plastic fencing mesh or high strength netting barricades must be erected sufficient distance away from the excavation wall to ensure the barricades structure integrity. The mesh should be woven around each alternative star picket, fixed to the star pickets (by cable ties) as close to the ground as possible, Maximum space between barricade supports (star picket) of 5 m, star pickets must have end capes.
- 8.5.1.4 Full perimeter plastic fencing mesh or high strength netting barricades may be used as an alternative to barrier board type barricade. Set-up specification as per 8.5.1.3 above.
- 8.5.2 LONG TERM WORK MORE THAN 3 DAYS for construction /maintenance work, acceptable barricades for excavations of more than 200 mm in depth and (where applicable) on low volume 60km or less roads. Plastic fencing mesh or high strength netting barricades must be erected around the full perimeter of the excavation. Set -up specifications as per 8.5.1.3 above.
- 8.5.3 An access gate (for plant /workers) may form part of the barricade provided it is supervised when opened and designed so it can be easily closed off to prevent unauthorised entry.
- 8.5.4 One or more sides of the meshed barricade may be substituted with plastic interlocking water barricades installed as per manufacturer's specifications. An example where this may be required is on one side of the excavation parallel to the edge of a road.
- 8.5.5 Site steel temporary fencing i.e. to barricade around a site shed or four sided mesh pit guards may be used for e.g. a hole in the ground.
- 8.5.6 For both short and long term work, where possible / practicable a trench cover plate (made of suitable material to support the load) should be placed over the excavation.
- 8.5.7 Interlocking water barriers may also be used as both a barricade and for delineation purposes e.g. for working on road islands or for a pedestrian barricade around or through a worksite.
- 8.5.8 **Note:** Excavation of 1.5 m or more, a safe work method statement must be completed prior to the commencement of work.

8.6 BARRICADES - MINOR WORK FOR INSIDE / AROUND BUILDINGS

- 8.6.1 Include; retract-belt or expandable barricades, post and chain/danger tape or rope barricades also traffic cones. Barricading

responsibilities prescribed in 8.1.3 (above) must be complied with and advance warning signs for the barricaded area must also be considered.

8.7 TAGGING RULES

- 8.7.1 There are two types of safety tags used at SCC, Danger and Out-Of-Service tags.
- 8.7.2 Out-Of-Service tags are used to avert the operation of plant and equipment that may be faulty, damaged or out of service to provide protection for people, equipment and environment. Also they provide information about non - standard settings, conditions or safety information.
- 8.7.3 Out-Of-Service tags must not be used in place of a danger tag or relied on for personal protection. The tag should be secured so that it is not easily dislodged, and be attached in a prominent position easy for people to view.
- 8.7.4 Out-Of-Service tag can only be removed by;
 - a) An authorised competent person after the item has been serviced / maintained / repaired and is being returned to service.
 - b) An Isolation Person when used as part of an energy isolation.
- 8.7.5 The person removing the Out-Of-Service tag must ensure that there are no risks or hazards to people, plant or environment, if the plant /equipment were operated.
- 8.7.6 There is no limit to the length of time that an Out-Of- Service tag may remain attached to plant / equipment, however it must be replaced if deteriorated or unreadable.
- 8.7.7 An Out-Of-Service tag must have the person's name, date, signature, Group contact number they belong too, description (purpose for attaching the tag).

8.8 DANGER TAGS

- 8.8.1 Danger Tags are only used for personal protection, the hazardous energy supply must not be switch on and to do so may endanger the life of workers.
- 8.8.2 Danger tags are also to be used to advise workers that a piece of plant or equipment if operated will pose (Danger-life threatening hazard) to the safety of workers/others in the vicinity.
- 8.8.3 **Note:** A Danger Tag does not perform the isolation function and is not an effective isolation device by itself and should not be relied on for personal protection other than in circumstance outlined in 5.1.6.of this procedure. The tag only acts as a means of providing information to others at the workplace of `Danger- life threatening hazard`.
- 8.8.4 The tag should be durable and fixed to an isolator clearly stating the warning and any specific hazards related to the isolation. Also the

person's name, date, signature, Group contact number they belong to. The tag should be secured so that it is not easily dislodged, and be attached in a prominent position on each isolation point and only be removed by signatories on the tag.

8.9 AUDITING ISOLATION COMPLIANCE

8.9.1 The WHS Unit will conduct periodic - Isolation Compliance Audits against this procedure and P22 Safety Audit Program.

APPENDIX 1 DEFINITIONS

Isolation Person	A person authorised by SCC supervisor/manager to perform isolation. Also trained and deemed competent to enact related responsibilities outlined in SCC P28 Energy Isolation & Barricading Procedure.
Competent Person (protected person)	Means a person who has acquired through training, qualification, or experience, or a combination of these, the knowledge and skills enabling that person to perform the specified tasks i.e. work under isolation as a protected person.
Danger - Do Not Operate tag	A label/sign that identifies that cleaning, servicing, repairing or alteration is being undertaken on isolated installations, plant or equipment or a piece of plant or equipment is in an unsafe condition to operate and poses a dangerous-life threatening hazard.
Hazardous energy source	A source of power including: electrical, mechanical, hydraulic, pneumatic, chemical, thermal, gas and other. Note: energy sources may include stored energy that may be released as kinetic energy, such as an object suspended above the work area
Isolation	Removing or disconnecting an energy source to prevent the inadvertent restoration of energy, either through activation/start-up of installations, plant or equipment, or release of stored energy.
Positively Isolated (hazardous energy)	Means an isolation system that includes; isolation plan, identification of hazardous energy sources associated with the job, de-energise stored energies, lockout/tag-out, proven de-energised and de-isolation.
Isolation Lock (Yellow lock)	A lock attached by Isolation Person after an isolator is placed in the safe (isolation) position to prevent accidental or inadvertent movement from the safe (isolation) position.
Personal Lock (Red lock)	A lock attached by individuals for personal protection from hazardous energy sources after an isolator is placed in the safe (isolation) position.
Lock-out device	A device that prevents the inadvertent energising of an energy source on installations, plant or equipment.
Out-of-service tag	A label that indicates plant / equipment is Out Of Service and the item must not be energised.
Short Term Isolation	Used when work is less than one shift, isolation of less than three isolators and more than one person being a (protected person).
Short Term Isolation (Protected Person Working Alone)	Used when work is less than one shift, isolation of less than three isolators. A `Protected Person Working Alone` must ALSO be deemed an Isolation Person.

<p>Short Term Isolation (Isolation of Mobile Plant)</p>	<p>Isolation specific to maintenance work associated with mobile plant where the plant`s main isolation source is the ignition start-up/shut-down switch `Key`. Positive isolation is achieved by the removal and security of that `Key` and where possible /practicable disconnect battery leads.</p> <p>Also includes Isolation trucks with attached crane by above method, ONLY in cases where the cranes jib emergency anchor point is used for emergency rescue purposes.</p>
<p>Extended Isolation</p>	<p>Includes work extending beyond one shift, isolation of three or more isolators and generally involves several workers- working under isolation (protected persons). This type of isolation is suitable for larger projects as well.</p>