

Purpose

The purpose of this procedure is to prevent unauthorized reinstatement of isolation points through the use of locks.

Scope

This procedure applies to all assets owned, operated and leased by Melbourne Water and all employees and contractors.

This procedure does not cover the determination and documentation of the required isolation, this is described in the [Isolation Standard](#).

1. Locking Single & Multiple Isolation Points For One Work Permit

Step	Who	Action
1	Permit Authoriser	Selects a Lock Out Box that contains: <ul style="list-style-type: none">• the Permit Authoriser Lock• the Permit Holder Lock• appropriate number of Isolation Point Locks• Cascade Lock (if required)
2	Permit Authoriser	Applies Isolation Point Locks and 'Danger – Do Not Operate' tags to each Isolation Point.
3	Permit Authoriser	Places the Isolation Point Lock key(s) and any leftover locks in the Lock Out Box and closes box.
4	Permit Authoriser	Attaches the Permit Authoriser Lock to the Lock Out Box and retains the key.
5	Permit Authoriser & Permit Holder	Inspect all the isolation points with locks and verify isolations are effective.
6	Permit Authoriser	Gives the Permit Holder the Permit Holder Lock.
7	Permit Holder	Attaches both the Permit Holder Lock and Personal Safety Lock to the Lock Out Box and retains the keys.
8	Permit Holder	Shows the Work Party Members all of the isolation points with locks.
9	Work Party Members	Signs on to the Work Permit and attaches their Personal Safety Lock to the Lock Out Box.
10	Permit Holder & Work Party Members	Lock on and lock off daily or when moving to another job.

2. Locking Isolations Points Shared Across Work Permits

Cascaded Lock Out Boxes are used to prevent the removal of isolation points that:

- are shared between separate work tasks, or
- could impact the simultaneous operation of a second permit.

Step	Who	Action
1	Permit Authoriser	Identifies the primary Work Permit and associated Lock Out Box which contains the isolation points required for the secondary Work Permit.
2	Permit Authoriser	Selects a Lock Out Box that contains: <ul style="list-style-type: none">• the Permit Authoriser Lock• the Permit Holder Lock• appropriate number of additional Isolation Point Locks• Cascade Lock with number of Lock Out Box marked on the lock or on an attached tag
3	Permit Authoriser	Applies Isolation Point Locks and 'Danger – Do Not Operate' tags to each additional isolation point.
4	Permit Authoriser	Places the Isolation Point Lock key(s) and any leftover locks in the Lock Out Box and closes box.
5	Permit Authoriser	Locks Cascade Lock onto the primary Work Permit Lock Out Box and places the key into the Lock Out Box for the secondary Work Permit.
6	Permit Authoriser	Attaches the Permit Authoriser Lock to the secondary Lock Out Box and retains the key.
7	Permit Authoriser & Permit Holder	Inspects all the isolation points with locks and verify isolations are effective. This includes the relevant primary Work Permit isolation points.
8	Permit Authoriser	Gives the Permit Holder the Permit Holder Lock.
9	Permit Holder	Attaches both the Permit Holder Lock and Personal Safety Lock to the secondary Lock Out Box and retains the keys.
10	Permit Holder	Shows the Work Party all the isolation points with locks.
11	Work Party Members	Signs onto the Work Permit and attaches their Personal Safety Lock to the secondary Lock Out Box.

3. Locking Single and Multiple Isolation Points With Additional Own-Isolations

Step	Who	Action
1	Permit Authoriser	Selects a Lock Out Box that contains: <ul style="list-style-type: none"> • the Permit Authoriser Lock • the Permit Holder Lock • an appropriate number of Isolation Point Locks • Cascade Lock
2	Permit Authoriser	Applies Isolation Point Locks and 'Danger – Do Not Operate' tags to each isolation point.
3	Permit Authoriser	Places the Isolation Point Lock key(s) and any leftover locks in the Work Permit Lock Out Box and closes box.
4	Permit Authoriser	Attaches the Permit Authoriser Lock to the Permit Lock Out Box and retains key.
5	Permit Authoriser & Permit Holder	Inspect all the isolation points with locks and verify isolations are effective.
6	Permit Authoriser	Gives the Permit Holder the following items: <ul style="list-style-type: none"> • Work Permit Lock Out Box • Permit Holder Lock • Cascade Lock • Own-Isolations Lock Out Box
7	Permit Holder	Applies the Cascade Lock to the Work Permit Lock Out Box.
8	Permit Holder	Places the Cascade Lock Key into the Additional Own- Isolations Lock Out Box.
9	Permit Holder	Applies Isolation Point Locks and 'Danger – Do Not Operate' tags to each additional isolation point and close.
10	Permit Holder	Places the Isolation Point Lock key(s) and any leftover locks in the Additional Own- Isolations Lock Out Box and closes.
11	Permit Holder	Attaches both the Permit Holder Lock and Personal Safety Lock to the Additional Own- Isolations Lock Out Box and retains the keys.
12	Permit Holder	Shows the Work Party all the isolation points with locks associated with both Lock Out Boxes.
13	Work Party Members	Attach their Personal Safety Lock and tag to the Additional Own- Isolations Lock Out Box.

4. Locking Permit Holder Isolations and Dynamic Isolations

4.1 Single Isolation Point

Step	Who	Action
1	Permit Holder or Blue Lock Holder	Attaches Multi-Lock Device and 'Danger – Do Not Operate' tag to the isolation point.
2	Permit Holder or Blue Lock Holder	Places a Permit Holder Lock on the Multi-Lock Device.
3	Permit Holder or Blue Lock Holder	Attaches their Personal Safety Lock and tag to the Multi-Lock Device.
4	Work Party Members	Attaches their Personal Safety Lock and tag to the Multi-Lock Device.

This process can also be managed with a Lock Out Box as per 4.2 if attaching a Multi-Lock Device to the isolation point will cause either access issues or asset damage.

4.2 Multiple Isolation Points

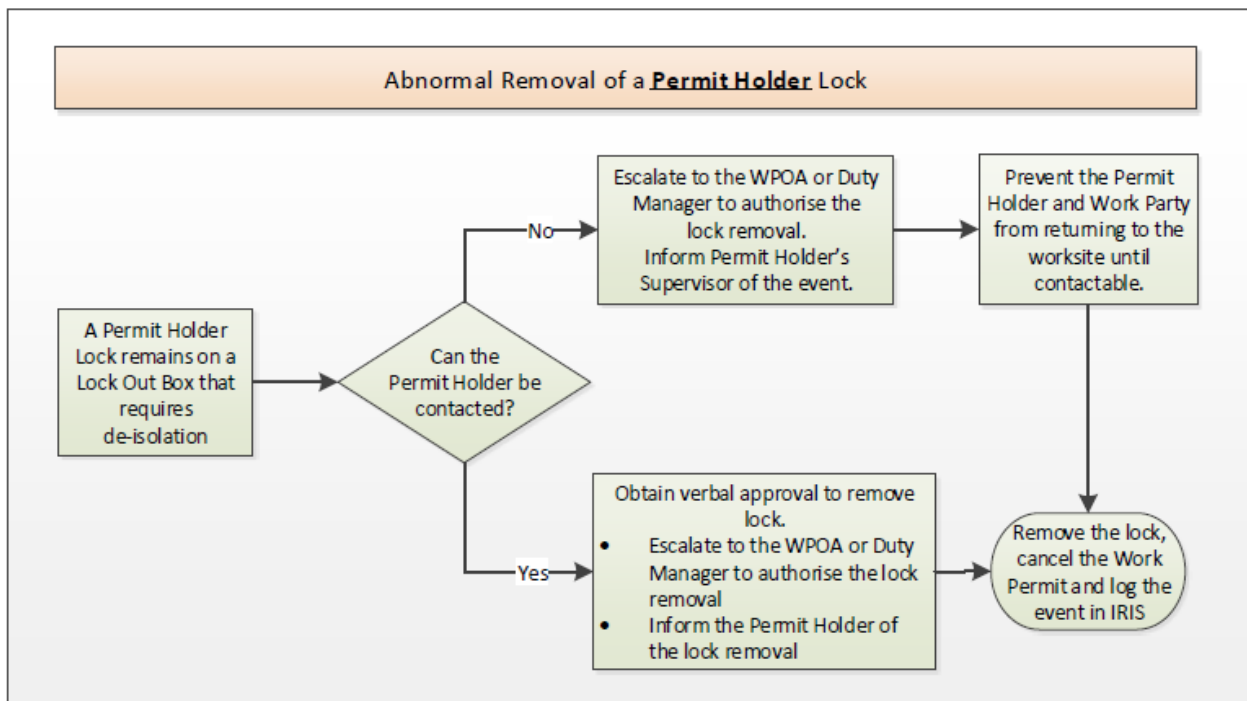
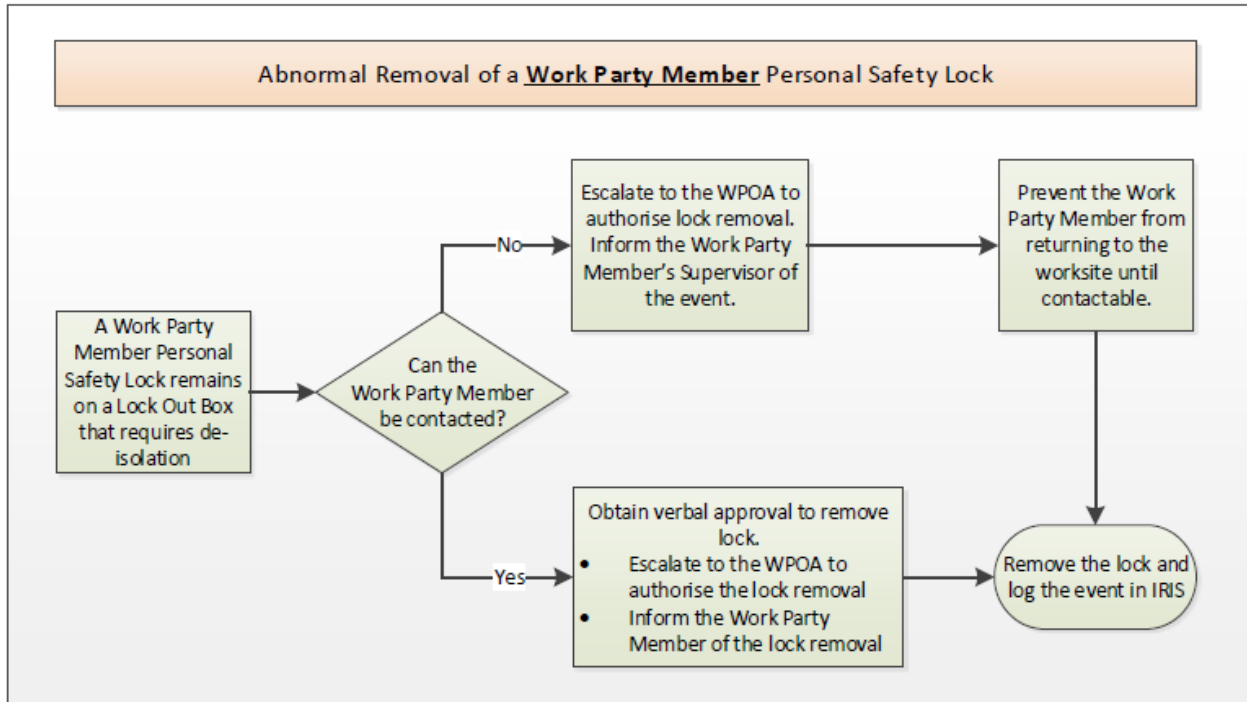
Step	Who	Action
1	Permit Holder	Attaches Isolation Point Locks and 'Danger – Do Not Operate' tags to all isolation points as detailed on the Work Permit.
2	Permit Holder	Places the Isolation Point Lock key(s) and any leftover locks to a Lock Out Box and closes box.
3	Permit Holder	Attaches both the Permit Holder Lock and Personal Safety Lock to the Lock Out Box and retains the keys.
4	Permit Holder	Shows the Work Party all the isolation points with locks.
5	Work Party Members	Attach their Personal Safety Lock and tag to the Lock Out Box.

5. Removing Locks

Step	Who	Action
1	Permit Holder & Work Party Members	Remove their locks at the completion of the work activity.
2	Permit Holder	Provide a handover to the Permit Authoriser.
3	Permit Authoriser	Removes the Permit Authoriser Lock.
4	Permit Authoriser	Removes the Isolation Point Locks and 'Danger – Do Not Operate' tags.

6. Abnormal Lock Removal

After meeting the criteria of 'Abnormal Permit Cancellations' in the Work Permit procedure, locks can be removed in line with the following flow charts:



7. Working when Locks Cannot Be Applied

If isolations do not have the facility to be locked or a lockout device cannot be used/purchased, the following process applies:






Step	Who	Action
1	Permit Authoriser	Obtain agreement from the Permit Holder to work without the lock.
2	Permit Holder	Document the controls to be taken in the risk assessment.
3	Permit Authoriser	Document the precautions to be taken in the Permit.
4	Permit Authoriser	Attach the 'Danger - Do Not Operate' tag.
5	Permit Authoriser	Advise the Work Permit Operating Authority of the situation.
6	Work Permit Operating Authority	Raise an IRIS event (Hazard) to identify the isolation point(s) which cannot be locked, with the intent to modify the asset within six months where practicable.

8. Storage of Spare Keys




- All spare keys should be locked in a secure cupboard and be accompanied with a list of the current contents. The keys should be readily identifiable to allow for easy auditing.
- The cupboard should be protected by a system that allows for monitoring of access events so that they can be monitored and audited. E.g. BACID. The use of a spare key must be approved by the Work Permit Operating Authority and the event must be entered into IRIS.
- The Work Permit Operating Authority shall routinely audit the Spare Key cupboard to ensure all keys are accounted for.

9. Equipment







9.1 Locks

Lock	Description	Example
Isolation Point Lock	Isolation Point Locks are YELLOW and: <ul style="list-style-type: none"> • locked onto isolation points such as valves, electrical isolators, etc. to keep equipment in an isolated state A set of keyed alike locks is to be used on one Work Permit only.	
Permit Authoriser Lock	Permit Authoriser Locks are BLACK and: <ul style="list-style-type: none"> • the first and last lock to be added to or removed from a Lock Out Box to prevent returning an asset to service 	
Permit Holder Locks	Permit Holder Locks are BLUE and: <ul style="list-style-type: none"> • key kept by the Permit Holder until the permit is surrendered • locked onto the Lock Out Box until the task is complete or return to service is required 	
Personal Safety Locks (PSLs)	Personal Safety Locks are RED and: <ul style="list-style-type: none"> • are uniquely keyed • must be installed/removed by the Permit Holder and Work Party Members every day or when leaving the work site 	
Cascade Locks	Cascade Locks are GREEN and: <ul style="list-style-type: none"> • applied to Lock Out Boxes to link groups of isolations together • also able to be used for managing Additional Own-Isolations 	

9.2 Hardware

Hardware	Description	Example
Multi Lock Device	Enables multiple Personal Safety Locks to be fitted to a Lock Out Box or used as a Lock Out Aid.	
Lock Out Aids	Lock Out Aids are used to lock off isolation points which do not have inbuilt locking points. Lock Out Aids may be permanently installed or portable.	
Lock Out Boxes	Lock Out Boxes are used to store: a permit and; Isolation Point Lock keys, spare Isolation Locks and Cascade Lock keys. The keys must be securely fastened within the Lock Out Box to prevent removal of locked isolation points.	

9.3 Tags

Tags	Description	Example
Personal Safety	Enables multiple Personal Safety Locks to be fitted to a Lock Out Box or used as a Lock Out Aid.	
Danger – Do Not Operate	Used for indicating an energy source or isolation point that has had its state changed under a Permit Process or Isolation Standard.	
Process Isolation	Used to identify equipment that has had its state changed for operational purposes. This tag shall not be used to identify dangerous equipment or be used in conjunction with a Permit Process.	
Testing Underway	Used to identify equipment that has had its state changed to facilitate testing as part of the Work Permit Process. This tag shall only be used in relation to the Permit Process and must only replace a 'Danger - Do Not Operate' tag.	
Commissioning in Progress	Used to identify equipment that has not been handed over to Operations staff where the state may change as part of a project handover process.	
Out of Service	Used to ensure that unsafe plant or equipment is identified prior to repairs or replacement is carried out.	

10. References

Links
Isolation Standard
Work Permit Procedure

11. Document History

Date	Reviewed/ Actioned By	Version	Action
March 2020	Scott McMillan	7	Removed Assurance Activities section as this is now included in the Control of Work Procedure
March 2020	Systems Integration Specialist	8	Updated formatting, new template and naming convention.