1. Purpose

The purpose of this document is to describe how to work safely on, near or in the vicinity of High Voltage equipment.

2. Scope

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

3. Process

The Blue Book 2022 shall be followed, with the addition of the contents of this procedure.

3.1 Electrical Access Permit (EAP)

An EAP is to be issued when isolation is required or when operating within the safe approach distances of live electrical apparatus.

3.1.1 EAP Planning

Step	Who	Action
1	Recipient in Charge	Initiate planning and scheduling of the task and ensure that: • the electrical apparatus to be worked on, the location and the scope of work is clearly defined • an appropriate amount of preparation time has been allowed for the work party to be able to manage the work safely • a risk assessment which adheres to H&S PRO Good to Go or equivalent is completed • relevant parties have been notified of works required.
2	Operating Authority	Confirm that: • the activity will require an Electrical Access Permit (EAP) • allocate an appropriate Authorised Electrical Operator(s) to implement isolations, apply earths and authorise work.
3	Recipient in Charge and Authorised Electrical Operator	Review the task details ensuring: • the electrical apparatus to be worked on, the location and the scope of work is clearly defined including required isolations, earthing and testing requirements • expiry date of the EAP is agreed • any hazards that may arise from outside the work scope have been identified • any potential impacts on Operations are understood • work will not conflict with other open permits. This conversation does not have to be completed face to face.

The Authorised Electrical Operator cannot be the Recipient in Charge; however, the Authorised Electrical Operator may be a member of the Work Party.

3.1.2 Preparing and issuing an Electrical Access Permit

Step	Who	Action
1	Authorised Electrical Operator(s)	Build new or review existing switching instructions. New switching instructions shall be reviewed by another Authorised Electrical Operator before being implemented. Select Lock Box with appropriate number of Equipment Locks.
2	Authorised Electrical Operator(s)	Complete EAP ensuring that: • All isolations/earthing are identified and documented and a copy of the single line diagram is attached where appropriate. • Both the start and expiry dates are documented and consistent with the estimated length of the job. • All relevant information that was used in preparation is transferred to the EAP. • The Lock Out Tag Out section is completed.
3	Authorised Electrical Operator(s)	• Implement the isolations and earthing in the order specified in the switching instruction. • Where applicable, ensure barricading is erected and signage located appropriately. • Install signage where necessary to identify apparatus covered by the EAP and adjacent live electrical apparatus. All Isolation Points shall be locked and tagged and the Black Permit Authoriser Lock installed as per H&S PRO Lock Out Tag Out (LOTO)
4	Authorised Electrical Operator	Ensure the Recipient In Charge is aware of the: • Electrical apparatus covered by the EAP. • Precautions taken. • Nearest points of supply. • Adjacent live electrical apparatus or potential sources of induction. • Isolation boundary and installed signage. Confirm that the Recipient In Charge is: • Authorised to receive an EAP. • In agreement about working earths and their location that are to be applied before work commences. Authorise the work by signing the 'Issued By' section of the EAP. Attach Permit Authoriser lock to the Lock Box and handover to Recipient in Charge.
5	Recipient in Charge	Shall either:

		• Accept and sign the 'Acceptance' section of the EAP once satisfied that all isolations and earthing have been implemented as agreed; or • Request an Authorised Electrical Operator to review the adequacy of the implemented isolations and earthing. Signing the EAP indicates that the Recipient in Charge: • Fully understands the scope of the work, isolations and earthing. • Will be an active member of the work party.

3.1.3 Working with an Electrical Access Permit

Step	Who	Action
1	Recipient in Charge	Attaches Permit Holder Lock and Personal Safety Lock to assigned Lock Box.
2	Recipient in Charge	Confirm that all Work Party Members are: • Appropriately skilled • Inducted, trained and authorised as required. Work Party Members that are an Instructed Person shall have direct supervision by an Authorised Person.
3	Recipient in Charge	Briefs all Work Party Members on the: • Scope of Work including individual steps of task • Ensure that the work party understand the electrical apparatus covered and the limits of the electrical access permit • Ensure that work party are satisfied with the precautions taken • Ensure that work party is aware of the nearest adjacent live electrical apparatus • Documented risks and controls.
4	Work Party	Once satisfied that they understand the: • Scope of work including individual steps of task • understands the electrical apparatus covered and the limits of the electrical access permit • is satisfied with the precautions taken • is aware of the nearest adjacent live electrical apparatus • Documented risks and controls. Sign onto the EAP and attach their Personal Safety Lock.
5	Recipient in Charge	Initial the 'Recipient in Charge Verification' space on the EAP for each Work Party Member, confirming that Steps 2 and 3 have been completed.
6	Recipient in Charge	Ensure that the EAP is stored at the worksite in a clean, secure and accessible manner.

Step	Who	Action
7	Recipient in Charge and Work Party	Implement all: • Risk Assessment controls • All documented Working Earths.
8	Recipient in Charge	For every day of work ensure that: • A briefing is undertaken to cover any potential changes in the work scope or environment. Scope changes need to be approved by the Authorised Electrical Operator and documented • All Work Party Members sign on and off the EAP • Personal Safety Locks are reapplied and removed • All Work Party Member signatures are initialled.
9	Recipient in Charge	At completion of work ensure: • The work area has been left in a clean and safe state • Working earths have been removed and documented on EAP, unless otherwise agreed with Authorised Electrical Operator • Electrical apparatus status is known • Completion and submission of any necessary commissioning documentation to the operating authority.
10	Work Party	Remove Personal Safety Lock and sign off EAP.
11	Recipient in Charge	Ensure all Work Party Members have: • Signed off the EAP • Removed their Personal Safety Lock. Once satisfied, remove: • Personal Safety Lock and Permit Holder Lock.
12	Recipient in Charge	• Sign the 'Relinquished' section of the EAP Return EAP, all associated documentation and Lock Box to Authorised Electrical Operator. Inform Authorised Electrical Operator of status/condition of electrical apparatus.

3.1.4 Cancelling an Electrical Access Permit

Step	Who	Action
1	Authorised Electrical Operator	Ensure that the Recipient in Charge has: • Completed the work as stated and communicated the status/condition of the apparatus to the Authorised Electrical Operator. • Made the worksite safe. • Confirmed Work Party Members are signed off. • Returned Lock Box with all managed locks removed.

		If any of the above has not been completed, a new EAP must be reissued for the Recipient in Charge to rectify.
2	Authorised Electrical Operator	• Physically inspect work site. • Remove the Permit Authoriser Lock. • Remove all 'Danger – Do Not Operate' tags and Equipment Locks. • Remove all barricades and signage. • Cancel the EAP by signing the 'Permit Cancellation' section.
3	Authorised Electrical Operator(s)	Reinstate the equipment as per the restoration switching instruction.
4	Authorised Electrical Operator	Store EAP and associated documents in a numerical order that is easily retrievable.

3.1.5 Change in Recipient in Charge

If the Recipient in Charge will be absent from the site for more than two hours, there shall be a new Recipient in Charge nominated for work to continue.

Any change in Recipient in Charge shall be discussed and agreed to by an Authorised Electrical Operator.

Step	Who	Action
1	Authorised Electrical Operator and Recipient in Charge	Discuss the need to change the Recipient in Charge and once agreed, both update and initial the changes to their EAP copies.
2	Recipient in Charge	Cease work and conduct a handover to the new Recipient in Charge. This includes: • Showing and explaining the scope of work • Ensure that the new Recipient in Charge is aware of the responsibility of signing and accepting the EAP • Ensure that the new Recipient in Charge understands the electrical apparatus covered and the limits of the electrical access permit • Ensure that the new Recipient in Charge is satisfied with the precautions taken • Ensure that the new Recipient in Charge is aware of the nearest adjacent live electrical apparatus • Ensure that the work party is made aware of the new Recipient in Charge • Hand Permit Holder Lock Key to new Recipient in Charge • Cross out name in acceptance section and initial

		• Documented risks and controls.
3	New Recipient in Charge	Signs and dates the EAP near the 'Acceptance Section' and signs on as a Work Party Member and writes 'RIC' next to their name.

3.1.6 Abnormal EAP Cancellations

An EAP can be cancelled abnormally:

- For the purpose of Emergency Management;
- When the condition of the working environment changes;
- Unsafe work practices exist within the EAP or there is a breach of the requirements of this procedure.

If the operational status of the isolated equipment is not known, the EAP may be cancelled but the equipment cannot be returned to service.

In these cases, the Authorised Electrical Operator can also take on the responsibility of the Recipient in Charge to initiate the cancellation process with the approval of the site HV Operating Authority.

Before any Recipient in Charge and Work Party Member locks are removed, refer to H&S PRO Lock Out Tag Out (LOTO).

3.1.7 Change in Electrical Access Permit Expiry

If it becomes apparent that the work cannot be completed before the expiry date, the Authorised Electrical Operator and Recipient in Charge may agree a suitable period of extension for the EAP. This shall only occur after confirming that the extension won't conflict with other upcoming scheduled/planned works.

All copies of the EAP shall be updated accordingly in the Amendments Section and the operating authority advised.

If the expiry time is passed without a request for extension, all work must cease immediately.

3.1.8 Sanction for Testing Authorisation (SFTA)

The Sanction for Testing authorisation shall be used if the testing of high voltage electrical apparatus has the potential to produce currents and voltages hazardous to the human body. The process for EAP shall be followed, with the use of the Sanction for Testing authorisation in place of the Electrical Access Permit. The EAP shall be cancelled or suspended before an SFTA can be issued.

3.1.9 Statement of Condition Apparatus or Plant (SCAP)

A SCAP is a statement outlining the condition of apparatus/plant. It shall be used between operating authorities to confirm plant conditions and isolations to support an access authority or other operational requirements. This statement covers only the state of the electrical apparatus or plant specified and does not by itself authorise work on the electrical apparatus or plant.

3.2 High Voltage Personal Protective Equipment and Safety Equipment

All equipment and PPE used when working on or near high voltage equipment shall be used and maintained as described in H&S PRO Personal Protective Equipment (PPE) and H&S PRO Safety Equipment.

The following table outlines the minimum PPE requirements:

	Entering HV Switchroom	Maintaining HV Equipment	Local HV Racking or applying local earth
Non-Conductive Eye Protection	✓	✓	✓
Natural Fibre, Flame Retardant or 'PPE 2' Clothing	✓		
Flame Retardant Clothing or PPE 2		✓	✓
Insulating and Over Gloves			✓
Safety Helmet (Non-vented preferred)	✓		
Safety Helmet – Non-Vented		✓	
Arc Flash Full Suit - 40 Cal/cm2			✓
Hearing Protection			✓
Fully Enclosed Footwear	✓	✓	✓

3.3 Training

The following table outlines the training requirements of each of the roles associated with High Voltage management.

Role	Training Requirement	Refresher
Instructed Person	Working Well at Melbourne Water	-
	Site Hazards and Information	-
Safety Observer	Spotters (overhead) – refer to Energy Safe Victoria general requirements.	3 Yearly
	Melbourne Water - Entry to High Voltage Enclosures	2 Yearly

Role	Training Requirement	Refresher
Recipient in Charge, Authorised Recipient	Electrical Access Permit Recipient Course UETTDRRF09	3 Yearly
	Provide First Aid in an ESI environment – UETTDRRF10 or equivalent	Annual
	Melbourne Water Permit System Training	2 Yearly
	Melbourne Water - Entry to High Voltage Enclosures	2 Yearly
Authorised Electrical Operator, HV Operating Authority	HV Consumer Operator or equivalent	3 Yearly
	Provide First Aid in an ESI environment – UETTDRRF10 or equivalent	Annual
	Melbourne Water Permit System	2 Yearly
	Melbourne Water - Entry to High Voltage Enclosures	2 Yearly

3.4 Authorisation

Completion of any specific site training to the satisfaction of the operating authority, with consideration of competency based training and/or the skills matrix.

Then signed off by the local High Voltage Operating Authority.

4. Responsibilities

Role	Responsibility
Authorised Electrical Operator	• Authorise issue of EAP, SFTA, SCAP and VA Permits after review of work scope and hazards identified • Implement identified isolations and operational earths • Monitor the operations and process to ensure Recipient in Charge is notified of changes that may affect the safety of the Work Party • Cancel the EAP if there is a risk to the safety of people and/or assets • Confirm completion of necessary commissioning sheets and submit to the operating authority.

Role	Responsibility
Recipient in Charge	• Receive the EAP and conduct work in accordance with the risk assessment and the implemented isolations and operational earths • Brief the Work Party on the EAP conditions • Ensure all Work Party are appropriately skilled • Maintain communication with Authorised Electrical Operator to ensure any changes to work environment are identified and responded to • Complete any necessary commissioning sheets.
Work Party	• Undertake the work in accordance with EAP conditions. • Raise any issues with the Recipient in Charge.
Authorised Tester In Charge	• Receive the SFTA and conduct work in accordance with the risk assessment and the implemented isolations and operational earths • Brief the Work Party on the SFTA conditions/precautions • Manage earthing authorised on the SFTA • Ensure all personnel are cleared prior to commencing hazardous testing • Ensure all Work Party are appropriately skilled • Maintain communication with Authorised Electrical Operator to ensure any changes to work environment are identified and responded to • Complete any necessary commissioning sheets.
High Voltage Operating Authority	• Ensure that all relevant personnel are aware of this procedure and understand when an EAP is required • Ensure that personnel comply with the requirements of this procedure • Ensure assurance activities are undertaken and reviewed • Act as single point of escalation for high voltage related issues • Participate in the HV Governance Group in line with the charter • Complete two yearly compliance competency check of and operators • Receive any necessary commissioning sheets.
High Voltage Governance Group	• Ensure the group operates in accordance with the agreed charter • Undertake review of system effectiveness, with reference to the results of the assurance activities and any incidents • Provide feedback to the Chief Safety Officer (CSO) or delegate(s) of any system wide issues requiring attention.

5. References

Document title (speak to your Melbourne Water host to view any reference documents below)
The Blue Book 2022
H&S PRO Control of Work
H&S STA Isolation
H&S PRO Lock Out Tag Out (LOTO)
H&S PRO Personal Protective Equipment (PPE)
H&S PRO Safety Equipment
H&S FOR Authorised Electrical Operator
H&S FOR Authorised Recipient in Charge
H&S FOR Electrical Access Permit
H&S FOR Statement of Condition of Apparatus/Plant
H&S FOR Sanction for Testing

6. Stakeholder Consultation

Stakeholders	
High Voltage Governance Group	Service Delivery
Service and Asset Lifecycle	HSE

7. Document History

Date	Reviewed/ Actioned By	Version	Action
February 2025	High Voltage Electrical Specialist	35	General review of document with references to Blue Book; updated other references. Added procedure in the current MW template.
January 2024	Information Management	33, 34	No changes to document (IM changes only)
June 2023	SHEQ Service Delivery Advisor	32	Updated links to most recent Blue Book 2022
February 2021	Manager, SHEQ Integration & Specialised Services	31	Publish Procedure & change workflow review to 5 year interval – Manager SHEQ Service Delivery