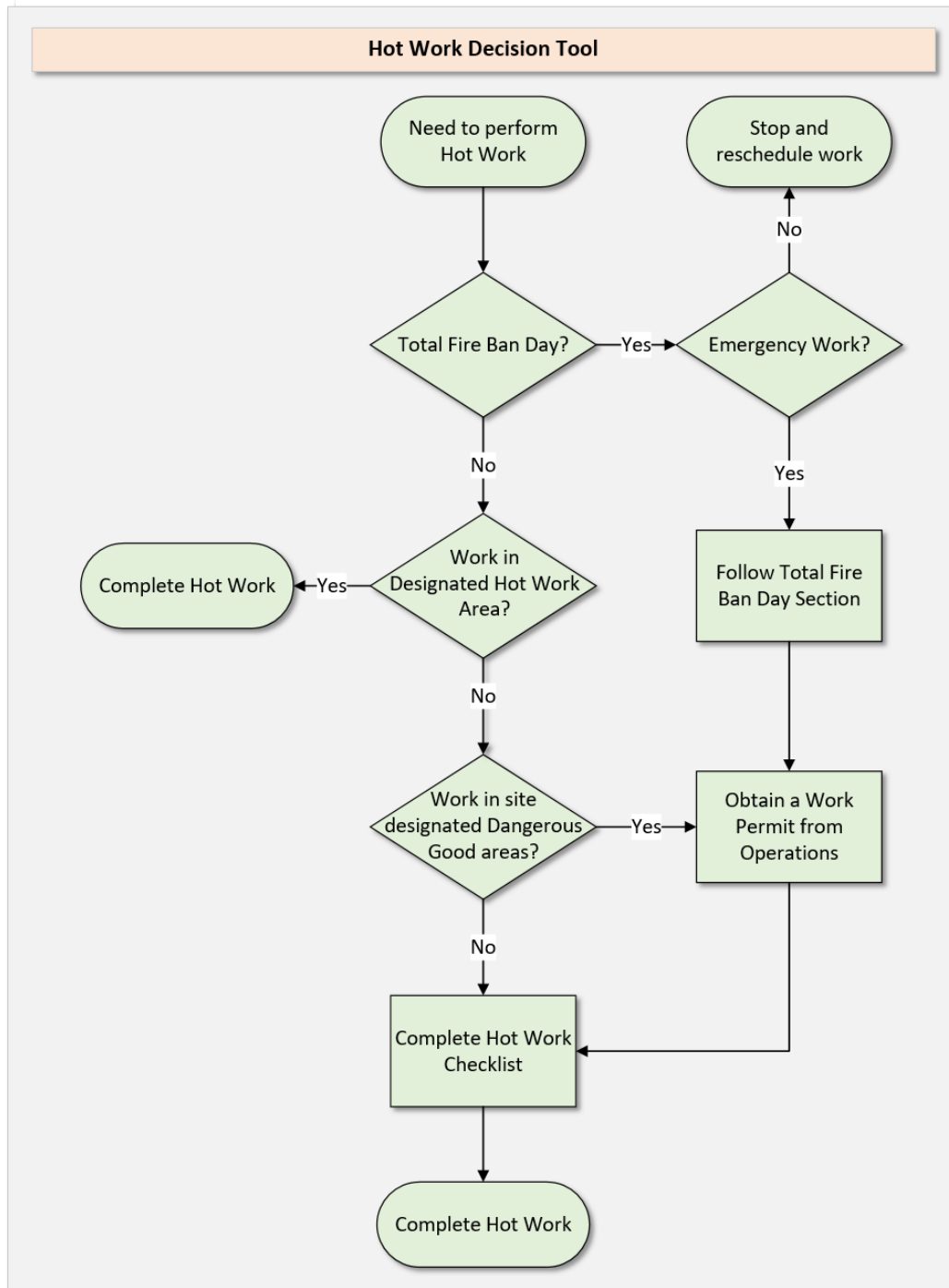


## Purpose

To define the precautions to be taken prior to and during hot work to prevent the possibility of fire or explosion, that may result in harm to people, assets or the environment.

## Scope

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



## 1. Hot Work Management

### 1.1. Identification of Hot Work

Hot Work is work that involves, or may generate naked flames or sparks that may ignite a fuel source.

Hot Work includes, but is not limited to:

- Welding
- Metal Grinding
- Thermal or oxygen cutting
- Flame heating

This procedure **does not** cover the following:

- Operating heavy machinery such as Utes and Excavators
- Electrical based tasks where the equipment may inadvertently cause a spark in a Hazardous Area. These requirements are covered by AS/NZS 60079:17.

For example:

- Instrumentation Calibrations
- Taking non-hazardous area rated electrical equipment into the zoned area.

### 1.2. Eliminating the Need to Perform Hot Work

Wherever possible, alternative work methods that eliminate the need to carry out Hot Work shall be considered.

Examples of alternatives to Hot Work are:

- mechanical fixings / chemical bonding of materials in lieu of welding
- threaded pipe fittings in lieu of soldering
- cold metal cutting equipment.

## 2. Designated Hot Work Areas (e.g. Welding Workshop)

A Designated Hot Work Area is a workspace that is clear of vegetation, potential fuel sources and hazardous atmospheres, such as a Welding Workshop.

These Areas must have:

- An appropriate fire suppression system
- No flammable liquids or substances
- No combustible materials
- No open drains or openings
- No Wooden/Flammable Furniture
- Clear delineation of where Hot Work is permitted to be performed
- Signage present indicating "Designated Hot Work Area"
- Safe entry and exit

To classify a location as a Designated Hot Work Area, areas need to meet the requirements of the [Designated Hot Work Area Approval Form](#) and be clearly sign posted.

Where Hot Work needs to be performed outside a Designated Hot Work Area, refer to Section 4.

## 3. Hot Work in Site Designated Dangerous Goods Areas

Site management shall identify and risk assess the locations where chemicals are stored above manifest quantities ([refer Chemical Management](#)). Hot Work in these areas will require a Work Permit.

## 4. Hot Work Checklist

Where Hot Work is conducted outside a Designated Hot Work Area, the [Hot Work Checklist](#) must be completed by the person doing the work.

The Hot Work Checklist shall be reviewed and approved by the supervisor or person overseeing the work prior to commencement. The Checklist is only valid for one shift and must remain on site in an accessible location.

## 5. Total Fire Ban Days

Only Emergency work shall be conducted on a Total Fire Ban (TFB) day in accordance with the relevant external agency. Copies of Fire Agency Permits can be located [here](#).

External agency boundary maps:

- [CFA and MFB Boundary Map](#)
- [DELWP Boundary Map](#)

## 6. Hazardous Areas and Unsafe Atmospheres

While working in a designated Hazardous Area, or where the activity may generate an explosive atmosphere, or unsafe oxygen levels, atmospheric testing shall be conducted prior to and continuously during work.

If an unsafe atmosphere is detected, work shall not commence or continue and the relevant Area Owner must be notified.

Work can only restart once atmospheric conditions have returned to normal levels.

## 7. Fire Watch Responsibilities

When Hot Work is conducted outside a Designated Hot Work Area, a Fire Watch must:

- Have suitable fire extinguishing equipment
- Be able to monitor/conduct communications in the event of emergency
- Continually monitor the atmosphere for explosive-gas levels
- Not allow Hot Work to proceed outside the scope specified in the Hot Work Checklist
- Stop the work if necessary
- Be present for the duration of work and at least **30 minutes** after

## 8. Training Requirements

Those undertaking Hot Work and Fire Watch duties must successfully complete:

- Fire Extinguisher Training
- Online Basic Wildfire Awareness (if working in open areas of bush, grasslands or catchments).
- Hazardous Area Awareness Training (if applicable)

## 9. Management of Hot Work Records

All records associated with the Hot Work, shall be retained with the associated work pack documentation.

## Responsibilities

Role	Responsibility
<b>Individual / Fire Watch</b>	<ul style="list-style-type: none"> <li>Implement controls identified in the checklist and risk assessment</li> <li>Stop the job if it is unsafe or the scope of work changes</li> <li>Perform continuous air monitoring and record alarms</li> <li>Raise the alarm and notify Area Owner</li> <li>Inspect the work area at completion of work and remain for at least 30 minutes</li> </ul>
<b>Supervisor</b>	<ul style="list-style-type: none"> <li>Approve the completed Hot Work Checklist prior to work commencing</li> </ul>
<b>MWC Team Leaders/Managers</b>	<ul style="list-style-type: none"> <li>Co-ordinate assurance on Hot Work activities</li> <li>Approve the designated hot work and designated dangerous goods area(s) for the work site.</li> </ul>

## Definitions

Reference	Definition
<b>Area Owner</b>	Person responsible for managing work area and authorised to manage simultaneous operations.
<b>Explosive Atmosphere</b>	Mixture with air, under atmospheric conditions, of flammable substances in the form of gas, vapour, dust, fibres or filings which, after ignition, permits self-sustaining propagation.
<b>Hazardous Area</b>	An area that has the potential or does contain flammable substances or explosive gas atmosphere.
<b>Ignition Source</b>	Any process that generates or has the potential to generate flames, sparks, hot surfaces, mechanical impact sparks or incandescent material.
<b>Lower Explosive Limit (LEL)</b>	The concentration of flammable gas, vapour or mist in air below which an explosive gas atmosphere will not be formed.
<b>Risk Assessment</b>	A documented assessment of all hazards associated with the work, the risk levels and the controls required to ensure work can be performed safely.
<b>Total Fire Ban</b>	Days where fires are likely to spread rapidly and could be difficult to control.

## References

Reference	Definition
<b>Act</b>	<a href="#">Occupational Health &amp; Safety Act 2004</a>
<b>Regs</b>	<a href="#">Occupational Health &amp; Safety Regulations 2017</a>
<b>MWC</b>	<a href="#">CORP H&amp;S PRO – Chemical Management</a> <a href="#">CORP H&amp;S FOR – Hot Work Checklist</a> <a href="#">CORP H&amp;S FOR – Designated Hot Work Area Approval Form</a>

## Document History

Date	Reviewed/ Actioned By	Version	Action
Feb 2019	Safety Manager, Technology and Innovation	8	Procedure simplification Included section on Hot Work in vicinity of Dangerous Goods and Review of Flowchart
Sep 2018	Safety Systems Manager	7	Flowchart amended, Hot Work definition changed. Removed permitting requirements and added checklists. Clarified training requirements