

Ready, Set Fire

How to get Ready, Set-up and
Manage Fire Maintenance



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READY, SET ... FIRE

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Fire Maintenance

Alan Short

A leading expert on fire protection
maintenance for industry outsiders

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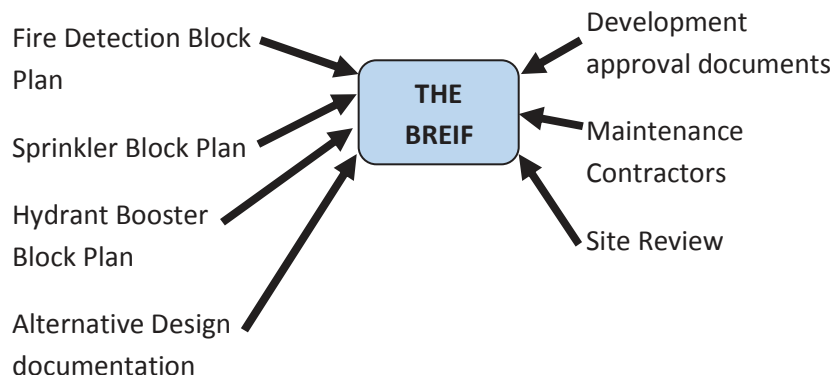
1 PREFACE

Nearly 100 fires every week! The South Australian Metropolitan Fire Service respond to around 1,200 structural fires every year. Given that many small fires are not reported to the fire service we estimate that the total number of fires in Adelaide are at least 5,000 each year!

Poor fire protection maintenance is a contributing factor to nearly all fire deaths and major incidents. From the Grenfell Tower in London where over 80 people died; to the Childers Backpackers fire in Queensland where 15 people died; the inadequate maintenance of the fire protection systems were a contributing factor.

There are no resources to simplify this process for industry outsiders. Until this book there was no easy way for a property manager, especially someone new to the industry, to understand their roles and responsibilities with regard to managing the fire protection maintenance of the buildings they manage.

7 PREPARING A BRIEF



The saying goes that we don't plan to fail but fail to plan. This is never more true than with fire and other emergencies. When the fire system works and the emergency procedures are applied faultlessly the media don't tell us. The media publicise the system failures! They tell us where there was no plan of what to do in an emergency or they tell us about a fire system that didn't work. When you review the fires that received large media reporting such as the Grenfell Tower fire in London, the Lacross Fire in Melbourne Docklands, you find examples of system failures. Each of these events have been discussed in the case studies section of this book.

READY, SET ... FIRE!

So how do you avoid your 15 minutes of fame in the media being about how a building was destroyed, people lost their jobs, people were injured or even worse, killed because of what you did or didn't do?

Simple, you make sure that the essential safety provisions, including fire protection systems and equipment in the building are maintained correctly. And the starting point is to prepare a brief of what you want done.

Data Collection

You need to know what you have in the building and to what standard it is to be maintained to. There are numerous sources for this information including:

- Building approval documentation
- Existing maintenance contractor's scope of works
- Review of the site by a competent person

If you are managing a building built in South Australia after 1990 you should be able to source building approval documentation from the local Council, specifically a copy of the Form 3. As discussed in chapter 3 Legislative framework this form will detail what was required to be installed in the building and the maintenance standards required to be complied with when the building was approved.

For older buildings the Local Council may have information but it is less likely as the form of approval documentation was more generic.

If no documentation is available, then more reliance will be placed in a site review.

If it is an existing building then there will also be an incumbent maintenance contractor. This contractor will be able to provide a scope of works for their current contract. It is recommended that this be sourced in the form of an annual calendar of scheduled maintenance activities, refer to Figure 5 for an example of the first 6 months of a year.

	January	February	March	April	May	June
Fire Extinguishers				✓		
Fire Hose Reels				✓		
Fire Alarm and Detection Systems - monthly	✓	✓	✓	✓	✓	✓
Fire Alarm and Detection Systems - annual	✓					
Fire Hydrants and Boosters Monthly	✓	✓	✓		✓	✓
Fire Hydrants and Boosters Annual				✓		
Exit and Emergency Lighting Monthly	✓	✓	✓		✓	✓
Exit and Emergency Lighting 6 Monthly				✓		
Means of Egress	✓			✓		

Figure 5 – Sample annual calendar of maintenance activities for the first 6 months of a calendar year

These two documents can be compared and collated to provide a single list of all essential safety provisions to be maintained and the maintenance standards to be used.

The quantities of equipment to be maintained and other key documents will be required to prepare the scope. The annual calendar of maintenance activities should include some of this information. The remainder will need to be collected by a competent person undertaking a review of the site. A competent person may be a maintenance manager, fire maintenance contractor, services engineer or private building certifier.

Some fire systems that might be installed in a building may be above and beyond the minimum requirements. These may include gaseous fire suppression systems installed to protect critical computer assets. A competent person will be able to identify these systems.

Some of the other documentation that should be collected include but is not limited to:

- **Fire detection block plans** - this is a plan showing where all the fire detection devices have been installed. These can be found at the fire panel.
- **Sprinkler block plans** - this is a plan showing the areas protected by the fire sprinkler system including some basic pipe geometry and performance requirements. These will be found at the fire sprinkler valves or fire pump.
- **Hydrant booster block plans** - this is a plan showing the layout of the hydrant system and the performance requirements. These will be found in the hydrant booster cabinet.
- **Alternative Design summary** - this is a document that outlines what parts of the buildings have alternative designs applied to them, as opposed to deemed to satisfy systems, refer to chapter 3 Legislative framework. These may be found with the fire detection block plans or in the original approval documentation of the fire system.

The final source of information will be the “as constructed” building manuals. Unfortunately in most cases these are not passed on to the current building owner so cannot be relied upon as a primary information source. But if available then they will include much of the information referred to above.

Collating the Brief

A brief can be as complicated or as simple as you require. It is our recommendation to keep it as simple as possible using a tabular format listing the system, the maintenance standard to be applied, key maintenance frequencies and the quantities (where relevant).

The following is an example of a brief for a fire protection contract. It should be noted that this book is only about the preparation and management of a fire protection maintenance contract. Some of the essential safety provisions listed in the Form 3 will not be maintained by a fire protection maintenance contractor. These items will be maintained by a mechanical services contractor, a lift maintenance contractor or an electrician.

Item	Test Standards	Test Frequencies	Number
Fire Compartmentation	BCA	Annually	Between Rooms Floor slabs Stairs
Fire Doors	AS 1851 Part 7	Monthly Annually	4
Means of Egress	BCA	Quarterly	
Exit and Emergency Lights	AS/NZS 2293 part 2	Monthly 6 Monthly	
Fire hydrant and booster	AS 1851.4-1992	Monthly Annual	1 x 4 Headed Booster 4 x single headed hydrants
Fire hose reels	AS 1851.2-1995	6 monthly Annual	16
Fire Extinguishers and Blankets	AS 1851.1-1995	6 monthly Annual	61 Dry Powder 5 CO2 2 Wet Chemical 2 Fire Blankets
Automatic fire detection and alarm systems	AS 1851.8-1987	Monthly Annual	1

Figure 6 - Example of Scope

For a template that can be used to prepare your brief refer to the website that accompanies this book. There are two templates, one for sites approved between 1990 and 2014 and one of after 2015.

Getting Help

If you are not local to the building or are not familiar with fire protection systems then you may require assistance from a competent person. A competent person may be a maintenance manager, fire maintenance contractor, services engineer or private Building Certifier.

For most fire maintenance contractors, the collection of the information and the collation of a scope is what they undertake as part of providing a quotation. If you have a trusted maintenance contractor then they will often be able to provide this service at low or no cost.

Alternatively refer to chapter 102 Where to from here about assistance available from the author.