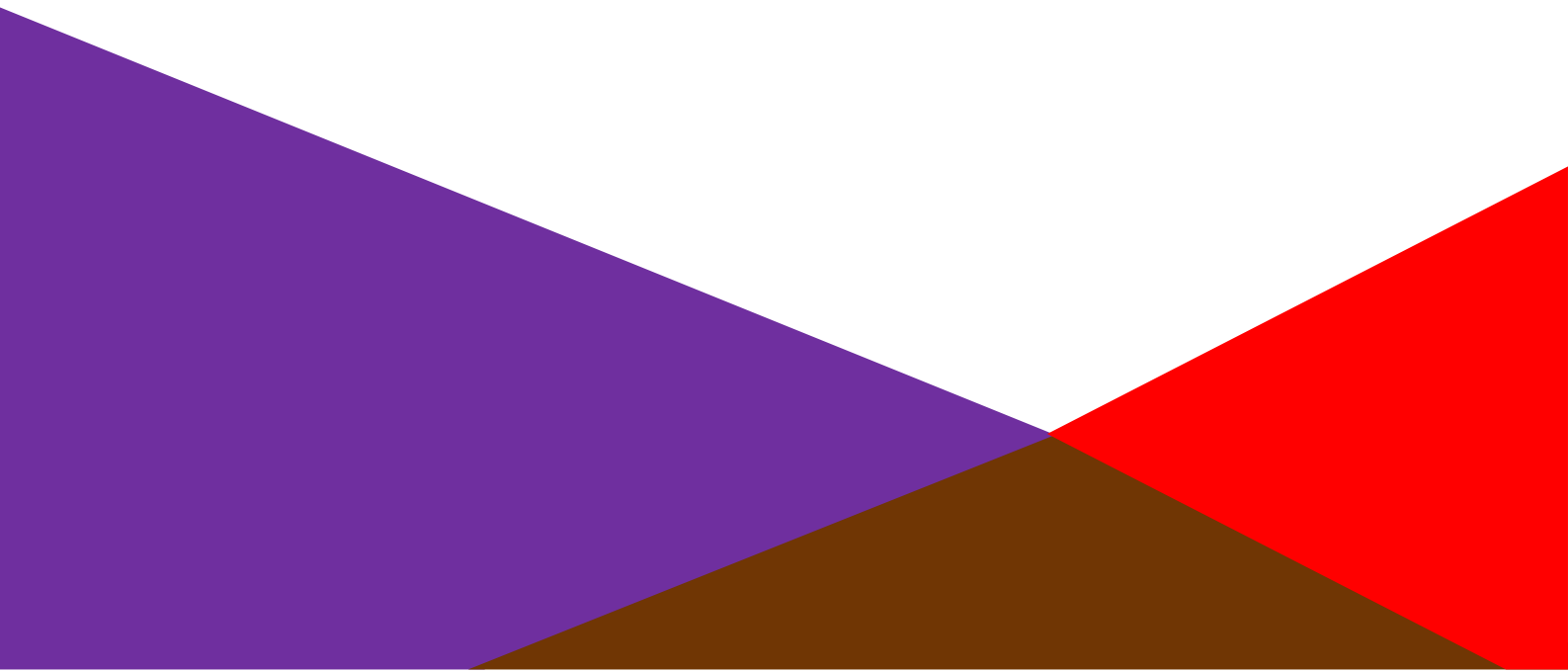


IMPAIRMENTS TO FIRE PROTECTION EQUIPMENT



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Introduction

Buildings and equipment are provided with fire protection and/or detection systems to reduce property damage and interruption to business in the event of fire. These systems must be in service at the outbreak of fire to operate effectively. However, invariably there will be times when these systems must be shut-down for maintenance, testing, system upgrade, or repair. Shutting systems off without taking proper precautions, or leaving these systems impaired longer than necessary, has been a contributing factor in many losses. In most cases, these losses could have been mitigated by properly managing the impairment.

Developing a formal Impairment Management Policy that requires use of Impairment Permits is the best solution toward mitigating this risk. Empowering management to take full ownership and responsibility is critical, as they are most familiar with the fire systems and hazards. This document outlines the basic considerations needed to develop an effective Impairment Management Policy.

Impairment Policy

Impairments exceeding 24 hours, impairments of major fire protection systems (i.e. sprinkler systems) or impairments of fire protection systems protecting important processes or plant areas should be notified to RSA Risk Consulting:

E-Mail: rc.impairments@uk.rsagroup.com

The notification form should be sent well in advance of a planned impairment or immediately following either an emergency impairment or the discovery of an improper impairment. RSA Risk Consulting should also be notified immediately after the restoration of the system.

An impairment policy should include the following:

- A policy document that mandates use of a formal permit to monitor all impairments to fire protection and/or detection systems.
- Senior management support and endorsement for the policy.
- The policy should stipulate specific penalties for non-compliance.
- The policy should be effectively, and routinely, communicated to contractors and employees.
- The policy should be reviewed and improved periodically.
- Competent personnel trained to authorise and manage system impairments.
- A comprehensive checklist of precautions.

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Only competent personnel should manage or authorise impairments. These personnel should receive training so that they are familiar with the fire and explosion hazards and protection features at the site. They should also fully understand their operational responsibilities, which include initial site inspection, permit issuance and a final check to ensure that protection/ detection systems are restored to service. These individuals should be closely involved in the periodic policy review process.

Precautions

The person authorising and managing the impairment should consider the following points. If any of the following items are of concern, no permit should be issued until the condition is corrected.

- Affected area minimised.
- Duration minimised.
- Timing appropriate.
- Manpower sufficient.
- Contingency plans to restore protection promptly in the event of fire.
- Good Fire Brigade response anticipated.
- Combustibles relocated.
- Temporary automatic protection provided as practical or required.
- Manual protection satisfactory
- Ignition sources controlled and hazardous operations ceased.
- Hot Work Permit issued if required.
- Fire watch provided, if unreliable detection.
- Emergency Organisation and Fire Brigade notified.
- Workers aware of permit requirements, required precautions, and/or the hazards involved.

The person authorising the impairment should always inspect the site and discuss the precautions with those performing the work prior to issuing a permit. They will be ultimately responsible for coordinating the fire watch, Emergency Organisation and Fire Brigade participation, along with worker education. They should perform aggressive follow-up and should call the Fire Brigade after restoration.

Minimise the size of the impaired area. Impairing multiple systems can result in an unnecessarily large exposure. Minimise the duration of the impairment by initially preparing the work area, and work continuously until the job is complete. If the impairment is due to planned work, make certain that the timing of the impairment is appropriate. Pre-plan with the Fire Brigade to assure that impairments will occur at a

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time when they can best respond. Have the Fire Brigade on-site for emergency impairments when all precautions cannot be taken.

Manpower is an important consideration with respect to minimising the duration of the impairment, and for ensuring effective response to a fire. Workers need to understand the Impairment Policy, permit precautions, and should be familiar with the hazards in the affected area. Develop contingency plans to restore impaired protection promptly in the event of fire. Make temporary caps available to plug sprinkler lines. Assign personnel the responsibility of re-opening sprinkler control valves quickly in the event of fire.

Whenever possible, relocate combustible materials to eliminate or reduce the fire hazard. If practical, provide temporary partial protection if the impairment will be of extended duration (e.g. feed automatic sprinklers through fire Brigade connections via hose lines). Ensure that adequate manual protection features are present (e.g. charged hose lines and portable fire extinguishers).

Control all ignition sources and cease any hazardous operations. Pay particular attention to Hot Work, smoking, electrical equipment, static electricity, molten materials, spontaneous heating, and/or sparks or hot surfaces associated with mechanical equipment. Hot Work should only be performed if proper precautions are taken and the work is supervised via issuance of a Hot Work permit. Hot Work should not be performed if alternatives such as sawing, bolting, or gluing are practical, or if automatic fire protection systems are impaired. Request that the Site Emergency Organisation stand by during emergency impairments to fire protection systems if Hot Work must be performed in an unprotected combustible occupancy.

A fire watch should be conducted in the affected area unless in-service, full-coverage detection is provided. Hourly surveillance of all affected areas will be sufficient for most occupancies. Increased frequency should be considered in higher hazard occupancies. Always notify the Fire Brigade and Site Emergency Organisation during the impairment. Solicit their participation as needed.

RSA Risk Consulting can be contacted by email with any questions that arise.
(E-mail above)

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Sign Off

After the impaired fire protection/detection system has been restored to service, the permit should be returned to the person or department who authorised the work. The time that the systems were restored should be recorded and the permit signed by the person(s) doing the work. The person or department who authorised the work should physically verify that the protection has been placed back in service before signing off. Impairment Permits should be maintained on file for documentation and policy review purposes.

Sample Impairment Form

The attached permit is included to assist our clients in developing their own impairment permit. This permit can be amended as required, as a permit that is tailored to meet the needs of your specific site is much more effective than a generic form. We suggest that a two-part permit be employed. The person who authorises the impairment should retain one copy for follow-up, and the other should be retained at the work site, preferably attached to the control device for the impaired protection. Printouts with copies can accomplish the same objective for sites that have infrequent impairments.

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Disclaimer

The information set out in this document constitutes a guide and should not be construed or relied upon as specialist advice. RSA does not guarantee that all hazards and exposures relating to the subject matter of this document are covered. Therefore RSA accepts no responsibility towards any person relying upon these Risk Control Guides nor accepts any liability whatsoever for the accuracy of data supplied by another party or the consequences of reliance upon it.



Email to: rc.impairments@uk.rsagroup.com

NOTE: Insurers should be notified at least 24 hours before a planned impairment or immediately following either an emergency impairment or the discovery of an improper impairment. Insurers should also be notified immediately following the restoration of the system.

FROM:

Person's Name		Policy No. (if known)	
Company or Group			
Trading Name			
Site Address			
Telephone No.			

EQUIPMENT IMPAIRED:

Sprinkler system		Heat detection system	
Hydrants		Smoke detection system	
Hose reels		Air sampling system	
Fixed gas flooding system		Infra-red/ultra violet detection system	
Fixed water spray system		Optical beam detection system	
Other (please state):			
Reason for Impairment:			

Date and time of notification	Location and occupancy of impairment area	Date and time of anticipated impairment	Date and time of anticipated restoration

FIRE PRECAUTIONS TAKEN

YES N/A

YES N/A

Staff & management notified			Firefighting equipment provided		
Fire service notified			Smoking prohibited		
Alarm receiving station notified			Area manned/patrolled		
Work will be continuous			Hazardous operations suspended		
Hot work will be prohibited			Other (please state)		

NOTIFICATION OF RESTORATION

NOTE: Insurers should be notified, by email or phone, immediately after the impairment has been completed & the system restored.

Restoration	Full		Partial		Date and time of restoration	
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Signed	Print Name	Position