

# RiskTopic

## Building Reopening: Risk Management Guidance



As the Covid-19 restrictions are lifted, buildings and facilities will gradually be reopened. We have produced this guide to consider the steps needed to safely re-open your building. The two checklists provided at the end of this guide cover the steps needed for:

1. Building Reopening
2. Restoring Power to Machinery (industrial risks)

### Important Notice

Whilst reopening is taking place, please ensure that Government guidelines and restrictions continue to be observed.

Safety is the number one priority when restoring power and utilities to your building. Please contact qualified engineers such as approved electricians, heating engineers or plumbers if you require assistance.

A process and equipment restart is best done as part of a carefully planned operation. Following manufacturer's guidelines and only using trained staff and approved contractors will help ensure a smooth transition back to work for your business or organisation.

Please note that this is intended to provide generic guidance only, to help you identify what practical steps may need to be taken to re-open your building safely. Please continue to refer to all government, regulatory and legislative guidance to ensure your organisation's continued compliance with their regulatory obligations with regards to building safety.

## Risk Control Measures - Reopening

- **Electrical Power (short term closure):** If you have isolated the power, or individual circuits, for a few weeks to a few months it is not anticipated that, under normal conditions, the system will have deteriorated.

For more complex locations, there should be a facilities manager or site electrician/engineer with experience of the systems to coordinate reopening of the site. For other locations e.g. individual retail units, before switching the power back-on, it is considered good practice to have a visual check of the circuit board(s) to ensure these visually appear in good condition and have no signs of damage e.g. to cable insulation etc.

### Important Note:

If in doubt, **DO NOT** switch on the power and contact a qualified electrician to support you. Your health and safety is the number one priority.

If there are any signs of water ingress to the building e.g. from a leaking roof or flood damage, then a qualified electrician will be needed to confirm when it is safe to restore power.

Please make sure electrical rooms and riser cupboards are clear of combustible materials before switching the power back on.

- **Electrical Power (long term closure, greater than 1 year):** If your building has been unoccupied for a longer period of time e.g. it had already been closed prior to the Government restrictions being imposed then the fixed electrical wiring will need to be inspected and tested prior to reusing the building.
- **Electrical – Hazardous Machinery & Plant:** If you have any hazardous machinery or plant, have a checklist to confirm equipment remains isolated and lock-out tags remain in place to ensure there is no automatic startup. Please see Appendix B which provides a detailed checklist for production machinery start-up.
- **Electrical – Ancillary Equipment:** Have a procedure in place for all ancillary equipment that may have been isolated e.g. photovoltaic panels or other roof mounted energy equipment, battery back-up power supplies or diesel generator back-up power. Please refer to the manufacturer's and installer's guidelines.
- **Air-conditioning (electrical power surge):** If you have isolated power to any air-conditioning units, there is a power surge risk if you re-start too many units at once. In consultation with an electrical engineer, plan for a phased switch on of air-conditioning units.
- **Electrical Power – Restore in Sections:** It is considered good practice to restore power in sections to avoid voltage fluctuations that could damage sensitive electronic equipment. Most locations will have kept power switched on to essential circuits e.g. intruder and fire alarms, in this case restore power to individual equipment and circuits rather than all at once. If you have, for any reason, isolated the power at the main switch, in this case only, switch off the individual circuit breakers (equipment, lighting and distribution boards), then turn on the main breaker, and restore power in sections to the distribution boards, lighting and then equipment. If in any doubt, please consult with a qualified electrician.
- **Electrical - Power Restored:** Once the power has been restored, it is considered to be good practice to visually check the circuit board(s) after 30 minutes (once devices on the circuit have been switched back on), for any abnormal conditions e.g. circuit breaker trip, any unusual sounds, burning smell or visual signs of overheating. If available, the use of thermal imaging by a qualified thermographer to support the identification of overheating is recommended.

**Important Note:** If any issues are found then please isolate the power, provided it is safe to do so, and immediately contact a qualified electrician.

A final visual check within the next 24 hours should identify any immediate issues.

- **Fixed electrical wiring test (periodic inspection):** If your fixed electrical wiring test and inspection is now due (either the complete test or the partial section if you complete a phased approach e.g. 20% of circuits each year), please ensure this is booked in as soon as is reasonably practical.

Where there are any specific legal or regulatory conditions for testing your electrical installation, then please ensure that these are complied with.

- **Electrical (refrigeration plant):** If you have isolated the power to refrigeration equipment there is a small possibility that such equipment may fail when turning the power back on e.g. due to a compressor failure. Ensure that such equipment is powered back on and working before purchasing new stock especially if you're dependent upon a single fridge or freezer. Please refer to the manufacturer's guidance or refer to a specialist depending upon the nature of the equipment.
- **Process/production machinery and equipment:** During a restart procedure there is a risk of damage to equipment, damage to control boards (hardware and software), leaks, power surges, incorrect operation of valves, component failure and invalidating warranties on newer equipment if the appropriate procedures are not followed.

Qualified engineers, in consultation with the manufacturer's and installer's guidelines, are to confirm the pre-start (recommissioning) requirements are in place and complied with before handing the machine back to the production team.

These procedures should include the start-up and safe operation procedures, including all safeguards, are in place.

Where there are multiple production lines and equipment, develop a written restart schedule that includes clear consultation requirements between the relevant teams to minimise the risk of equipment damage or injury to employees/contractors during the restart process.

**Important Note:**

**There is a serious risk of injury to employees and contractors during the restart process. Coordination and clear communication of all activities is particularly important to avoid the unexpected start-up of machinery whilst prestart inspections are taking place.**

Consider a rehearsal of the restart procedure for complex equipment. Gradually ramp up operations following the recommissioning to ensure the safe status of all components, monitoring systems and safeguards.

Consider updating the emergency procedures, including the need for an emergency shutdown and the presence, location and condition of critical spares ahead of the restart.

Please see [Appendix B](#) for a detailed checklist for machinery and plant restart procedures.

- **Statutory Inspections:** Please ensure you continue to comply with relevant legislation and ongoing guidance.
- **Legionella:** Legionnaires is a serious bacterial disease that can exist in water systems and be contracted by inhaling small particles of water that contain the bacteria. It is a particular concern within cooling systems and specific regulations apply

Water stagnation, dead ends in the water supply, reduced use of water and water that is stored above 20C, and below 50C – 60C, can create conditions that promote growth of the bacteria associated with Legionnaires disease.

- **Heating:** For heating and hot water you may have either switched your system to a lower temperature, in which case it is a simple case of returning the system to your normal settings. If a plumber has isolated the system e.g. either a wet or dry lay-up of your boiler, please contact your boiler engineer to reinstate the system.
- **Maintenance:** As part of the restart process, please resume your planned and preventative maintenance programmes as soon as possible, starting with safety critical and other key equipment.
- **Building Management Systems:** If you have a Building Management System (BMS) then checks should be made regarding any fault conditions and ensuring they receive attention. Have a contact list for your service companies and confirm they are able to respond to any critical fault.
- **Roof leaks:** If possible, visually inspect from a safe location for any external signs of damage to your roof.

Please internally inspect the top floor for any signs of water ingress e.g. puddles on the floor, damp walls or stains on ceiling tiles. These may indicate a leaking water pipe, damage to an internal gutter or leaking roof. These will require further investigation.

- **Walk round (internal & external):** If you have been unable to visit your building for routine inspections due to the Government restrictions, please complete a full internal and external walk round of your building. Externally, please look for signs of damage to fencing, any damage to the building e.g. signs of a break-in, discarded rubbish, blocked drains.

For the internal walk round, please complete in accordance with your normal weekly/monthly fire safety inspections e.g. checking fire doors are closed or that hold open devices correctly operate, fire exit routes are clear, fire exit doors operate and are not blocked.

- **Taps:** If you have isolated the water supply, you may have opened taps to help drain the system, or taps may have been left in the open position. Prior to reinstatement of the mains water supply, have a checklist for inspecting all toilets, kitchens, plant rooms and other areas with a water supply to ensure all taps are in the off position and plug holes are open and are not blocked. Repeat this check once the water has been restored.

Please make sure to only open the mains water valve during normal, weekday, opening hours and have the contact details for a plumber in case of any leaks.

- **Sprinkler and Fire Alarm Systems:** Check the sprinkler and fire alarm panels for any faults. If you have temporarily halted weekly inspections, please reinstate these along with your maintenance and service contracts.
- **Sprinkler valves:** Have a trained individual check that the sprinkler system is fully operational, including that the sprinkler valves are in the open position, that power supplies to the pump(s) are on and, for diesel pumps, there is at least  $\frac{3}{4}$  tank of fuel present.
- **Sprinkler and Fire Alarm Remote Signalling:** Make sure that your remote signalling is in place for the fire alarm and sprinkler system.
- **Sprinkler Impairments:** Please inform Zurich before switching off the sprinkler system i.e. if any maintenance work is needed, via our online notification system.

**Emergency Contact Details:** Make sure your emergency contact lists are up-to-date

## Building Reopening Checklist

### Appendix A (Page 1 of 2)

Here is a building checklist that we have developed to help manage the reopening aspects following the building closure. Appendix B below is specific to production machinery reinstatement.

Site Checks	Yes	No	Date
Before turning the power back-on, are circuit board(s) and associated cabling in good visual condition with no obvious signs of damage?			
Has the building experienced any water ingress or escape of water? If yes, please contact a qualified electrician prior to switching the power back on.			
Are connected devices switched off prior to switching the power back on?			
Are electrical switch rooms and electrical risers clear of combustible materials?			
Are there multiple air-conditioning units? Plan a phased switch on to avoid a power surge.			
Is electrical power being restored in sections to individual circuits and equipment?			
Has all refrigeration equipment been turned on to ensure it is functioning prior to restocking?			
Has ancillary equipment e.g. photovoltaic panels, UPS units, back-up power, etc. been checked in accordance with the original manufacturer's guidelines?			
After 30 minutes have you checked to ensure electrical systems are operating normally e.g. no burning smells, unusual sounds or signs of overheating?			
Within 24 hours have you carried out one further inspection to ensure the electrical systems are operating normally e.g. any burning smells, unusual sounds or signs of overheating?			
Do you have access to a thermal imaging camera and thermographer to identify hot spots?			
Have you completed an internal and external tour of the building to confirm that there are no signs of damage or other issues of concern e.g. leaking pipes or damaged roofing?			
Have you ensured all monitored sprinkler isolating valves are in the open position at the control panel?			
Is the fire alarm operational and have any faults been reported/rectified?			
Is the fire alarm and sprinkler system remote signalling operational?			

## Building Reopening Checklist

### Appendix A (Page 2 of 2)

Site Checks	Yes	No	Date
Are your statutory inspections up-to-date and in accordance with legal requirements?			
Legionella – have you confirmed compliance with legislative requirements before switching on water & cooling systems?			
Have air-conditioning systems been assessed in accordance with the manufacturer’s instructions?			
Is the heating programme fully restored or has a boiler engineer been contacted to restore a wet/dry lay-up boiler?			
Have you completed an internal fire safety inspection e.g. checking fire doors, escape routes etc. as per your existing procedures?			
Have you checked for any faults or warning on the Building Management System?			
Taps – prior to and following reinstatement of the water supply have you inspected all toilets, kitchens, plant rooms and other rooms with a water supply to ensure all taps are in the off position and plug holes are open?			
Has the sprinkler and fire alarm panel been checked for any faults?			
Have you re-established weekly fire protection tests and ensured maintenance inspections are in place?			
Has a competent person checked the sprinkler plant room to ensure the system is fully operational?			
Are your emergency contact lists up-to-date?			

## Building Reopening Checklist

### Appendix B (Page 1 of 2)

This Appendix B is specific to machinery reinstatement.

**Important Note:** Only competent engineers who are experienced in reinstating your machinery and plant should be used. Please ensure all legislative and regulatory guidance continues to be complied with as part of the reinstatement process.

Site Checks	Yes	No	Date
Are there documented pre-start procedures for each separate item of machinery in accordance with the manufacturer's and installers' guidelines?			
Machinery safeguards are checked and recorded to ensure they are in place and operational?			
Emergency shut-off (E-stop) devices and trips operating correctly & tested?			
Statutory Inspections are in date and any actions completed?			
All critical safety controls for electrical, air, steam and water supply are operating correctly, and function tested?			
Have shutdown conditions been checked to ensure all systems were appropriately isolated, including lock-out tags, to avoid unexpected start-up?			
Coordination and communication of restart process including systematic removal of any lock-off tags?			
Any zones with hazardous substances and/or potentially explosive atmospheres are clean and safeguards are in place?			
Hardware/software restart procedure of PLC's and control panels confirmed to avoid loss or corruption of data?			
Any localized fire suppression systems are operational?			
Visual check of machinery and plant to ensure no obstructions, debris, storage or other signs of damage is present?			
Planned activity & timescales are communicated to relevant personnel that machinery is being made live?			
Complete a rehearsal of the key steps?			
Confirm critical spares are available and in working condition?			

## Building Reopening Checklist

### Appendix B (Page 2 of 2)

This Appendix B is specific to machinery reinstatement.

Site Checks	Yes	No	Date
Ensure systems with remote monitoring are functioning?			
Increase frequency of inspection & use of diagnostic tools to monitor for abnormal conditions following restart:			
• Check fuel lines (visual for fuel and odour for gas)			
• Visually check hydraulic lines are not leaking			
• Check compressed air lines are not leaking			
• Check process cooling lines are not leaking			
Ensure equipment is not left running and unattended during restart until all systems have been fully verified.			
Have emergency and escalation procedures, and the action to take, been refreshed?			
Confirm emergency contact details for specialist support?			

This guidance may change as the current situation changes

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