

# Dealing with disaster

Warehouses are highly susceptible to both **fire** and **flood**, but there is still much you can do to protect your staff, your building and the goods in your facility – and to ensure that if disaster does strike, you make the speediest possible recovery.

**F**or any business fire and flood are probably amongst the worst nightmares imaginable. The wide open spaces usually found in most storage facilities mean that both fire and water can spread rapidly and unhindered; large quantities of combustible packaging can help spread fire or soak up damaging water, transmitting it to the products; and row upon row of racking, whether filled with pallets or not, can make access extremely difficult for those seeking to deal with such disasters as they are happening, whether in fighting the occurrence itself or moving product and people quickly out of the way.

But despite these drawbacks, there is much that can be done to help make your facility safer and ensure that if disaster does strike, your warehouse and your business can recover quickly.

## Fighting fire

Fire is perhaps the worse of the two threats, since a fire can destroy your facility completely and can be caused in many different ways, from an unexpected lightning strike during a storm to a deliberate arson attack by a disgruntled employee. Even if a blaze is contained before the whole facility is destroyed, it is usually hard to contain the effects of any water used to fight it and of smoke, both of which can do as much damage as the flames themselves.

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The most obvious way to protect the workplace is to ensure you have the correct fire alarm system in place and make sure that it is regularly maintained. In noisy environments the inclusion of a visual alarm – like a flashing beacon – added to the usual audible alert makes sense.

Smoke detectors, fire blankets and fire extinguishers are other obvious items to employ. But make sure any extinguishers are of the right sort to deal with the kind of fire you are likely to encounter and ensure also that you have a system in place to check, service and replace extinguishers, smoke detectors and



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other fire-fighting equipment.

Smoke control and ventilation equipment can also be extremely useful in helping to save life in a fire. These are usually roof-mounted and suitable for both general day-to-day air quality and smoke ventilation purposes.

Physical barriers to prevent the spread of smoke and fire can also help save life. Smoke curtains and firewalls, in particular, can be used to divide a warehouse into two or more zones, which not only limits the spread of smoke and fire but also helps to prevent smoke from cooling and falling down to ground level, where it may obscure escape routes and endanger life. Such systems can severely restrict the free movement of pedestrians and lift trucks between different zones, however – which is not only a potential hazard in terms of evacuating a building but also, of course, likely to reduce the efficiency and productivity of your day-to-day warehouse operation.

Sprinkler systems, too, can be very effective in fighting fire, but their use in warehousing is also somewhat debatable as they can cause enormous damage to stored products – even those not immediately threatened by a fire – and to warehouse equipment. They usually also require access to a large quantity of water which is not always readily available.

In terms of preventing the initial outbreak and spread of fire, don't allow anyone to smoke in your facility, make sure that any electrical systems are regularly inspected, including lighting, brief your staff to be vigilant and ensure you have a policy for all employees on what to do if they come across a fire. It may also

be worth considering closed circuit television (CCTV) systems to monitor your premises, both internally and externally, which should not only give you an early warning of any fire but would also help protect your facility in more general terms, for example in detecting intruders.

It's also worth considering what any fire in your facility will encounter as it spreads. Do you have major fire hazards lying around to fuel a fire, like discarded paper or cardboard packaging, build-ups of oily dirt from lift trucks, or spillages of flammable substances? If you do, invest in some proper cleaning equipment, like sweepers and scrubber-driers, and make sure they're used regularly.

**“While you can't always stop a fire from breaking out or a flood from sweeping in, any responsible logistics manager can – and always should – be prepared to manage it.”**

If you're handling products that could themselves present a danger – flammable or explosive items, in particular – zone them off in a protected area, restrict access to that area, and ensure any handling equipment operating in that zone is suitably modified. Be aware that, as with smoke curtains and firewalls, such physical restrictions will limit access and cycle times, however, and could get in the way of a speedy evacuation.

Finally, have a plan for evacuating the building, practice it regularly, review any bottlenecks and make sure that fire escapes and building exits are always left unblocked. →

**1. Automatic sprinkler systems** are used more than any other fixed fire protection system (Image courtesy of BAFSA British Automatic Fire Sprinkler Association Ltd).

**2. Spaciotempo's instant warehouses** are a proven solution in the event of fire, flood or storm damage. (Image courtesy of Spaciotempo UK Ltd).

## Sprinkler facts

- 40 million sprinklers are fitted world-wide each year.
- Sprinkler systems have been proven in use for well over 100 years.
- 90% reduction in losses from fires in buildings protected with sprinklers.

### In buildings fully protected by sprinklers:

- 99% of fires were controlled by sprinklers alone.
- 60% of fires were controlled by the spray from no more than 4 sprinklers.

Source: European statistics over 10 year period.



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## Warehouse flooding



isn't a great deal you can do - if your warehouse is located in the middle of a flood plain and it has been raining for forty days and forty nights, you're almost certainly going to get wet.

In floods of less biblical proportions, physical barriers such as sandbags can help – as long as you've got the sandbags to hand and the sand to fill them, of course. Temporary free-standing barriers can be deployed around your site, too, and fixed barriers can be used within your building to create a watertight seal around doors and other openings.

**“Flood water can damage almost anything it comes into contact with, and damage can also result from sand and silt deposited in buildings, floating objects and contamination of flood water with salt, sewage or other chemicals.”**

Having the time to deploy such physical defences is vital, of course. While flash floods can occur in such a short timeframe that there simply isn't time to react, there can easily be much more notice with other, slower-building floods. Local and national authorities around Europe have different means of putting out flood warnings, so make sure you know how and where to access that information and check it regularly.

If you know a flood is coming your way, secure and power down all electrical equipment, shut off your gas, electricity and water supplies, check your site's drainage system is clear of blockages and make sure any gas bottles on your site are secured (they may act as floating bombs). If you can, move sensitive or valuable warehouse equipment to a high point, or even off site altogether. Similarly, move the most damage-prone or valuable goods to the upper levels of your racking or to another site. Divert or delay any inbound deliveries that have yet to arrive and send out any goods that you are able to before the flood hits – the less you have in your warehouse at the time the flood strikes, the less damage you and your insurer will have to negotiate over later.

Again, it's important to have a policy about staff movements in a flood and to ensure your staff are aware of it. Do you have an easy way to let your staff know about an evacuation, for instance? Have you identified where staff can shelter in the event of a flood? And do you know which roads in your area are likely to stay open in a flood?

### Disaster recovery

Whether you're hit by a fire or a flood, it's absolutely vital that you have a plan in place, if

you are to recover as quickly as possible from a disaster. The key here is to assess the threat, thinking realistically about the after-effects of a fire or flood on your site and your business and how you might cope with them.

If your building or key pieces of equipment in it are badly damaged, it's usually easy enough to get replacements. Temporary buildings, for example, can be quickly erected and offer an excellent short or long term alternative to conventional storage. Short-term rental can be used to furnish your operation with a replacement lift truck fleet. Temporary workers can be drafted in from specialist agencies, if required. And if all else fails, your entire warehousing operation could temporarily be handed over to a third party logistics supplier to manage on your behalf.

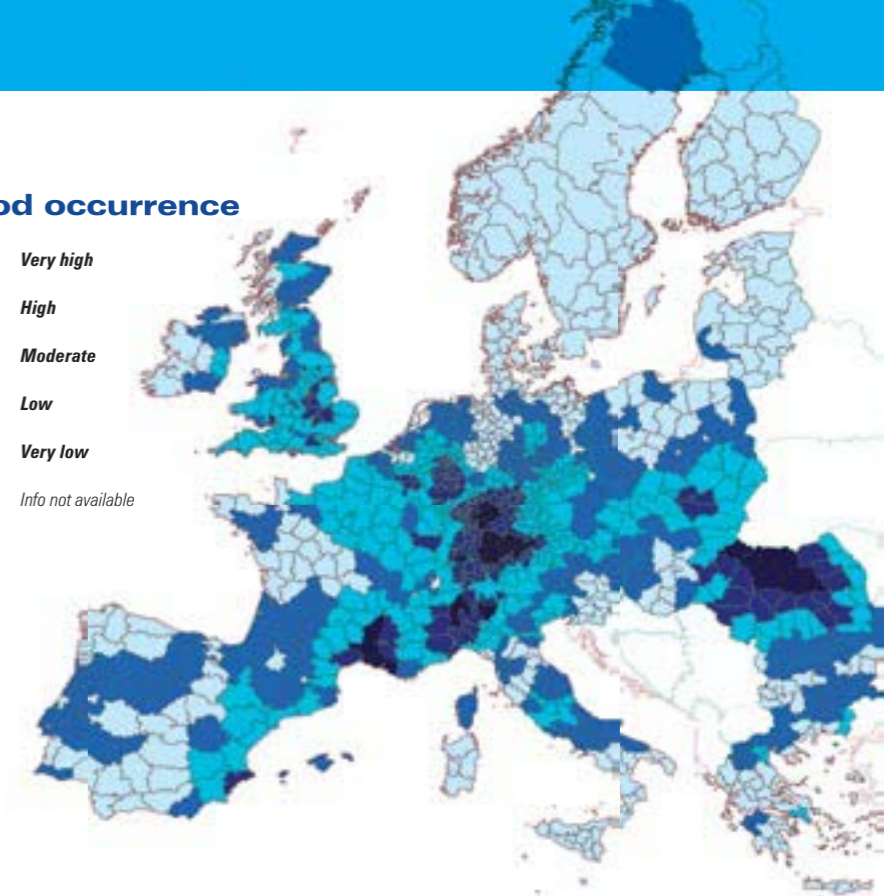
It's very important to have plans in place for your business data as well, however. If the only information about your stock is held in a warehouse management system, for instance, or all the details of who owes your business money are locked into your accounting package, you'll need to have an off-site backup of all your critical data, as well as the right software and hardware to hand to access it all, to get your business back up and running.

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There are complex issues to consider in many of these areas, of course – a temporary building, for example, may not offer the security or temperature control you require for your products and a third party's warehouse may not be in the most convenient location – so take the time to look into each of them in advance and decide on the measures that will suit your business best. Talk to the agencies and suppliers involved to make sure the ones you think you might use really will have the capacity and reaction times you'll need, check out competing suppliers and work out which ones you think will provide the best support in an emergency. Remember, you probably won't have too much time on your hands to look into all this once a disaster has already struck...

When you have worked out which solutions will be most appropriate, keep a list of emergency telephone numbers to hand which you can grab on your way out during an evacuation – ideally with a second copy stored

### Flood occurrence



Source. ESPON database (European Spatial Planning Observation Network).

off-site. This should include not just the service and equipment suppliers you may need to get hold of in a hurry, but also contact details for insurance companies, your local authority, your landlord (if you rent your facility), key suppliers and clients, and building services engineers, among others. Keep other vital papers – proof of ownership documents, for example, and your insurance documents themselves – to hand in the same way.

Make sure you review your insurance policies to see if they give you the cover you really need – not just on the building and its contents but also for the costs you will inevitably face after a disaster, like temporary equipment hire or loss of earnings. Check carefully that your business complies with any requirements your insurer may have in terms of fire and flood protection measures, too.

It's also important to develop some contingency plans with your regular suppliers and customers. Find out what your contracts with them say about failure to deliver as agreed and what might happen in the event of an emergency, and involve them in a plan about how critical goods or services might be restored after a disaster.

Most of all, remember that while you can't always stop a fire from breaking out or a flood from sweeping in, any responsible logistics manager can – and always should – be prepared to manage it. ■

### Flood checklist

#### Know your flood risk

- Do you know if you're at risk of flooding?
- Are flood warnings available in your area?
- Do you know how you can receive flood warnings?

#### Preparing a flood plan

- Have you developed flood contingency plans with suppliers and/or clients?
- Do you have a list of useful numbers including Floodline, local authority and insurance company?
- Do you know how to shut off your gas/electric/water supplies?

#### Staff training and evacuation

- Are you aware of correct flood safety procedures for you and your staff?
- Have you trained your staff on flood safety procedures?

#### Protecting property

- Are your stock, fittings and valuable equipment stored above flood level?
- Are your electrical sockets above flood level?
- Have you installed flood protection products?

For more information on flood protection visit:  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

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### Fighting flood

Flood represents an altogether different challenge. Flood water can damage almost anything it comes into contact with, and damage can also result from sand and silt deposited in buildings, floating objects and contamination of flood water with salt, sewage or other chemicals.

In terms of preventing a flood, there often

**Warehouse flooding**  
in Sheffield, UK.  
Hit by the worst flood in one hundred and fifty years (Images courtesy of The Market Oracle).