ALEXANDER BONHILL

Flood Continuity Management

Flood Response Plan

INTRODUCTION

Flood events are increasing in the UK. Since 1998 there has been at least one serious flood every year and you only have to look back at the relatively recent past to see what effect flooding has had on homes and businesses in 2007, 2014 and late 2015/early 2016.

The frequency of flooding appears to be increasing, calling into question long held views about 'return rates'. Historical data such as a 1:100 year event unfortunately can no longer be relied upon when it can be shown similar flood events every 20 or 30 years is actually more common. Consider this against the fact that we continue to knowingly build in known flood zones – indeed approx. 10% of existing industrial facilities are located in designated flood zones where around 80% of flood losses historically occur. Knowledge, awareness, understanding, preparedness and resilience of flood prevention will become increasingly important. For premises located in a known flood zone it is not a case of if it will flood, but when.

Research has shown the average cost to businesses unprepared for a flood event is approx. £2.1m; compared with £600,000 for those that plan and take action in advance to prevent the extent of flooding and prepare an effective response and recovery plan. As with planning for other business interruption events, fully understanding whether your premises is at risk of flooding is fundamental to preparedness.

Avoiding designated flood zones is the ideal, however this is often impossible.

So what can be done?

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Insurance & Risk Management

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DEVELOP A FLOOD RESPONSE PLAN

The majority of flood is predictable using a variety of tools from localised on site assessments looking at the topography of the land, proximity to watercourses, suitability of drainage systems; to the vulnerability of the building, machinery, plant and stock to damage from contaminated water. Sophisticated modelling tools can also be employed to provide predictions of the extent of flooding whether it be from nearby rivers, culverts, etc or from surface water flood incidents.

Flood losses are preventable. When planning flood prevention you should keep in focus two main strategies:

- **How to make the building more resilient in order to prevent flood waters penetrating key buildings and affecting critical machinery, plant and stock;** and
- **How to limit the damage flood waters can do if they enter the premises.**

Preparing a Flood Response as part of your Business Continuity Management Plan will help identify the risk of flooding, ensure measures are adopted to make your business as resilient as possible to the risk of flooding and identify the measures needed to assist the recovery of the business as seamless as possible if a flood event occurs.

Alexander Bonhill can help with this process by conducting a site visit and using available local knowledge together with flood prediction tools can help design a plan to avoid or at least limit the exposure to flooding.

THE PLAN SHOULD INCLUDE

- Identify if you are at risk of flooding and update findings at least annually.
- If you are in an area at risk of flood understand how the business activities could be affected. Complete a detailed Flood Assessment which should include all vulnerable apertures into the premises such as doors, windows, air bricks, service ducts, boiler vents and cable entry points.
- Time is critical when a flood is predicted; therefore key personnel should be fully aware of their roles and responsibilities during such an event. As with any Business Continuity Planning, regularly rehearsing and stress testing the Flood Plan is essential.
- Ensure you have adequate resources on hand to deal with the consequences of flooding.
- Identify essential contacts for the emergency services, HSE, water authorities / EA, clean up contractors, key staff, chemical suppliers whose products are on site etc and your insurance broker/provider.
- Obtain a site drainage plan which should locate and identify drainage arrangements, water supplies, chemical tank storage and location of spill kits, drain blockers, etc.
- Complete an up to date inventory of chemical substances on site including quantities, data sheets, storage vessels, production areas etc; together with details of the emergency procedures for dealing with spillages, leaking containers, water run-off from firefighting etc.
- Detailed written and communicated safe evacuation procedures for staff and visitors.
- The Plan should be kept up to date and reviewed at least every 2-4 years.

Environment Agency Floodline
0345 988 1188

Environment Agency Flood Check
www.gov.uk/flood

ACTIONS TO CONSIDER WHEN A FLOOD IS PREDICTED

When your premises are at imminent threat of flooding consider the following measures:

- Where possible relocate vulnerable plant, equipment, materials to a safe area. Special consideration should be given to high valued items and/or those critical to the continued operation of the business such as electronic equipment and records; paper archives; tooling/patterns; stock, materials and work in progress particularly susceptible to damage such as paper, card, and soft furnishings. Vehicles needed to help recover following flood such as forklifts, plant trucks; tractor trailers and the like should also be considered.
- Securely anchor any internal or external equipment likely to be displaced by high velocity, fast flowing flood waters. Moving of fixing such equipment will reduce the risk of furtherdamage from floating debris.
- If a sump pump system is present, perform an operational check.
- Safely shut down and isolate services and utilities within the premises including electricity and gas supplies, pumps, compressors, generators, fuel supply lines and tanks.
- Cover essential machinery and plant with large plastic sheets. Consider corrosion/rust preventative compounds and inhibitors.
- Have available filled sandbags and other flood remediation measures around the premises to deploy at possible entry points and around essential plant and machinery.

ACTIONS REQUIRED AFTER THE FLOOD

Within a timely fashion and as soon as it is safe to do so, the emergency response team and other personnel should begin damage evaluation and salvage response procedures which can help limit the extent of interruption to the business.

Notify your insurance broker/provider immediately following the flood as they will be able to provide further guidance and help in the clean-up of the premises and the selection of drying and dehumidification equipment suitable for areas of critical importance.

Flood losses are preventable. When planning flood prevention you should keep in focus two main strategies:

- Maintain existing fire and security protections at the premises and also consider whether additional short-term measures are needed to ensure the premises remains adequately protected against fire
- Contact utility companies to perform safety checks on essential services
- Notify key suppliers and customers
- Where contractors are appointed to assist with the salvage, clean-up and restoration operation ensure activities are completed in a safe manner and in compliance with standard Risk Assessment/Method Statement (RAMS) and Permit to Work (PTW), particularly in respect of the use of any Hot Work

During the restoration process consider the future risk of further flooding affecting the premises and interrupting business and take decisions to reduce this risk. For example:

- Avoid basement/below ground storage and production areas. If this is not possible, install appropriate, battery back-up automatic pump/sump systems.
- Replace conventional 'air bricks' with smart (self-closing) air bricks or at least deploy suitable air brick covers.
- Specifically designed plugs can protect ducts/service openings.
- Rebuild above predicted flood levels using structurally strong, non-porous materials in the building construction such as glass, ceramics, bricks and cement. Lightweight, composite panel construction buildings are often more susceptible to damage either from the insulation material becoming sodden and collapsing or from torrents of fast-flowing flood waters.
- Install approved non-return valves to drains, toilets, sinks, wastes and overflows; and bolt down sewer and drainage manhole covers.
- Avoid storing essential plant/equipment/materials below predicted flood levels.
- Re-position essential services such as electrical supplies, electronic controls and process equipment above the predicted flood level.
- Consider installing a Flood Alarm system.
- Use approved flood abatement measures such as flood barriers, boards and doors to keep water from penetrating the building. Ensure products satisfy the requirements of BS1188:2014 or BS EN13564.
- Flood/water proof the exterior envelope of the building at least to the level of predicted flood levels using suitable water repellent coatings and apply waterproofing treatments to the inner faces of the walls and floors (known as 'tanking').
- Consider constructing permanent landscaping such as earth bunds/mounds, curbs, ramps, etc. around the premises or at least critical buildings to redirect flood waters.
- Finally, update your Flood Response Plan.