



## The implications of a 'Dirty Bomb' for Property Owners

The catastrophic effects of a dirty bomb, both in terms of human lives and on property values, are potentially immense. The aim of this special issue of Realty Review is to try and give, in the UK context, some idea of potential quantum, whether insurance cover will work in such a situation, and how it will operate.



This document is a resume of a more detailed report issued by Realty Insurances. Should you wish to receive the full report, please contact us and we would be delighted to provide you with a copy.

### Dirty Bombs

There is no definition of a 'dirty bomb' used by the commercial insurance market. However, in essence, a 'dirty bomb' is a quantity of radioactive material that is dispersed into a wide area using a conventional explosive. The radioactive material it contains plays no part in detonating the bomb.

A dirty bomb can achieve the terrorist's desired effect even if it kills no one. People in the vicinity of the bomb will not know if it is 'dirty' or not and hence fear and panic will ensue. You cannot taste, smell, see or feel radiation.

The dirty bomb may not present the greatest risk to life when its immediate effect is compared with conventional explosives, but it can render large areas of property uninhabitable for a considerable period of time. Buildings both within the 'hot zone' and downwind of the 'hot zone' may be closed to access for months or years, and secondary contamination through the air may continuously increase the spread of affected buildings for some time

Removing radioactive material is a very different proposition to clearing toxic smoke following a fire or explosion and requires highly specialised techniques. Afterwards, even if experts declare a building completely safe, staff, customers and suppliers may refuse to return, with consequent implications for the value of the property. Depending on the terms of their lease, a tenant may argue that the building cannot be occupied, activate their rent cesser clause and eventually terminate the lease. If successful, it may be impossible to re-let the building, a sale will be difficult or impossible, and the landlord will face an effective total loss.



## **The Threat of Chemical, Biological, Radiological and Nuclear Terrorism**

We also need to think about the whole range of unconventional weapons at the disposal of terrorists, not just the radioactive option. These include chemical weapons which come in gas or liquid form, often deployed via an aerosol spray and particularly lethal in enclosed spaces. Chemical weapons are likely to cause the greatest number of immediate casualties and some agents, such as VX, are potent for an extremely long time.

Biological weapons are formed from bacteria, viruses, toxins or fungi. Such materials are relatively inexpensive to obtain, and many can be grown in fermenters like those used by pharmaceutical companies. Many biological agents mimic the effects of more benign agents such as flu and can remain undetected and spreading for days.

Unconventional weapons also include, of course, the detonation of a nuclear device, with its consequent near total destruction over perhaps an area of two miles in diameter. It is fair to say that this choice of weapon is the most unlikely, simply because it is the most difficult for any terror group to develop.

Collectively we refer to these terrorist threats as "CBRN" threats – chemical, biological, radiological and nuclear force or contamination.

Whereas conventional explosions are constrained by the amount of physical explosives used, "CBRN" weapons can be carried in the wind and remain lethal many miles from the initial site of the explosion. This has the added effect of spreading terror.

### **Emergency Response**

In the UK, the Home Office holds primary responsibility for counter-terrorism. Under the government's "New Dimension" programme, some 80 new incident response units have been set up to decontaminate large numbers of the public at the site of a "CBRN" incident.

Unfortunately, at present there are relatively few companies in the UK that can handle radiological or nuclear decontamination. Current experience mainly centres on nuclear plant decommissioning. Any long-term clean-up operation would probably be beyond the capabilities of the existing damage mitigation companies.



## Decontamination

Decontamination can be achieved by the destruction of the agent by chemical modification – but many of these neutralising chemicals can cause corrosion and etching on surfaces, ultimately damaging a structure almost as much as the warfare agent itself.

You can also decontaminate by physical removal of the agent by absorption, washing or evaporation, but this is never easy. Washing leaves a poisonous substance remaining in the decontaminant that must be disposed of under very strict rules and with few disposal sites licensed, there is an obvious cost implication. Sand-blasting the exterior of a building, with or without bleach, in an open environment will simply cause secondary contamination.

Physically screening off the agent so that it causes no further damage or exposure is the final option when considering decontamination.

## Terrorism Insurance in the UK – Pool Re

Pool Re is a partnership between the insurance industry and the government to ensure terrorism cover, including “CBRN”, is available on commercial property. Most insurers operating in the UK, including Lloyd’s syndicates, are members of Pool Re and are thereby able to offer property damage and business interruption (or loss of rent) covers against terrorism for commercial buildings. In fact these members cannot decline to offer terrorism cover if an insured party requests it.

The cover has exclusions relating to cyber terrorism and war, but there is no exclusion in respect of “CBRN” damage.

The scheme is restricted to commercial property located in England, Scotland and Wales; it does not apply in Northern Ireland, the Isle of Man or the Channel Islands.

Although the scheme does not extend to private property, it does cover residential property in commercial ownership, such as blocks of flats owned by a property company be it a limited company, partnership or trust. Pool Re does not cover private dwellings insured by individuals. These properties will most likely be subject to a limited terrorism exclusion under their general policy which will provide cover for risks such as a ‘conventional’ car bomb, but will not be liable for terrorist activity involving “CBRN” force or contamination.



Pool Re's definition of terrorism is:

"An act of persons acting on behalf of, or in connection with, any organisation which carries out activities directed towards the overthrowing or influencing, by force or violence, of Her Majesty's government in the United Kingdom or any other government de jure or de facto".

This definition raises numerous interpretational issues, but the Treasury has provided quite detailed guidance so that we know, for example, when they talk about an 'organisation', this would include even a diffused, decentralised association or combination of persons with no lower limit in terms of numbers or duration, although persons acting spontaneously in concert would not pass the test.

'Acting on behalf of' an organisation could include a cell working independently of the terrorist's hierarchy, but the line might be drawn in the case of a sympathiser working alone.

The 'activity' could be against private property and does not have to be against a government target.

The 'government' in question may be anywhere in the world and may or may not be officially recognised.

Under this definition, the 2006 murder, in London, of former Russian security officer Alexander Litvinenko with Polonium 210, was not classed as an act of terrorism because there was no intent to overthrow the government and the action was directed at an individual.

### **Availability of Cover in the Commercial, Stand-Alone Terrorism Insurance Market**

In the UK this stand-alone terrorism market tends to be the market of last resort as Pool Re provides a neat, convenient way of achieving comprehensive, all-risks cover against the terrorist threat. Secured lenders in the real estate sector will always exert pressure on their borrowers to buy full terrorism coverage and Pool Re meets this requirement.

It is very difficult for the commercial insurance market to provide cover against "CBRN" attacks because underwriters cannot use conventional aggregation models to analyse the risk and hence cannot set technical pricing. The total, global, non-government backed insurance market for "CBRN" cover is currently between US\$100 and US\$150m.



## Does Contamination Constitute 'Damage' as defined in insurance policies?

We have described how a dirty bomb may render properties uninhabitable, but with no obvious, visible sign of damage compared to a fire, flood or explosion. Hence, when assessing a policy's ability to respond to a dirty bomb the first, most basic thing to consider is whether contamination would constitute 'Damage' as defined in the policy cover. In such a scenario the costs that property owners are likely to incur would relate to clean up, decontamination and removal of contaminated materials, as opposed to the actual physical rebuilding of the property.

The good news is the insurers we have approached with the question have confirmed that they would consider contamination following detonation of a dirty bomb as 'Damage'. Although we have not asked the entire UK market the specific question, it is reasonable to assume that all major insurers follow this stance.

If a contamination incident was not classed as an act of terrorism, the claim would be viewed in the context of the general policy wording which will most likely have a Pollution exclusion reading:

"pollution or contamination unless resulting from a sudden identifiable unintended and unexpected cause which occurs in its entirety at a specific moment in time and place during any one Period of Insurance and is not otherwise excluded"

Again, senior underwriters have confirmed that the presence of the word 'unintended' in this exclusion would not prevent them from dealing with a claim that results from deliberate contamination, as long as the contamination is not the product of the policyholder's actions.

The general policy will also have a Radioactive Contamination exclusion reading:

"Damage to any property whatsoever or any loss or expense whatsoever resulting or arising therefrom or any consequential loss directly or indirectly caused by or contributed to by or arising from

- 1) ionising radiations or contamination by radioactivity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel
- 2) the radioactive toxic explosive or other hazardous properties of any explosives nuclear assembly or nuclear component thereof"



We mentioned the Litvinenko incident earlier and this example demonstrates neatly the difference between the policy exclusions under the general policy and the exclusions under the terrorism buyback.

As the Litvinenko incident was not classed as an act of terrorism, the insurers considered the incident in the context of the general policy wording. They advised that they had the right to decline any claim relating to the Litvinenko incident, citing the radioactive contamination exclusion detailed above, on the basis that Polonium 210 is a nuclear fuel.

The terrorism buyback does not contain an exclusion relating to Radioactive Contamination and as such, if the incident had been classed as an act of terrorism, a valid claim would have existed.

In actual fact, although insurers technically had the right to decline the claims, the fact that the Polonium 210 was in this instance used as a poison rather than a nuclear fuel, meant that the insurers involved as a result of the incident did actually deal with claims relating to the decontamination of premises visited by Litvinenko.