Buncefield Oil Terminal Fire  
- Lessons Learned

At approximately 6.03 am on the 11th December 2005 a series of explosions and ensuing fires engulfed the Buncefield Oil Depot in Hemel Hempstead 40 km from London. The depot, operated by Total and Texaco, supplied Heathrow Airport among other major installations in the area. The fire was later described as the largest fire to occur in Europe since World War II. Approximately 180 fire fighters, 26 fire pumps and 20 support vehicles tackled the blaze, which lasted several days.

A trading estate in close proximity to the Oil Depot suffered severe physical damage. The structural integrity of many of the buildings on the site was in question following the initial blast. Even buildings in excess of 800m distances were damaged. Insurers were facing millions of pounds worth of losses. The explosion alone registered 2.4 on the Richter scale.

At the time of the event, it was very difficult to project the values involved in this loss. Initial estimates indicated energy losses in the region of GBP500m (USD880m). This number was reduced to approximately GBP150m (USD265m) for the oil terminal itself at the time this paper was initiated.
Impact On Third Party Premises

Loss adjusters were severely impeded from entering the buildings on site due to a police restriction zone of 1km around the area. This restricted area was sectioned into three zones with Zone 3 being the area closest to the fire. Once loss adjusters were able to enter Zone 1, the least affected area, it was evident how intense the blasts were. Several buildings had suffered structural damage to walls, roofs, doors and windows. Clearly, buildings in Zone 3 suffered the most damage. Access to the site was not permitted for three days and even then, access was limited to buildings in Zones 1 and 2. Finally, by four days after the fire, loss adjusters were allowed to enter Zone 3. Many buildings required total rebuilds. It was too early to indicate the costs of these rebuilds. Gauging by the size of the site and the number of businesses affected, some sources estimated damages in excess of GBP500m (USD880m) for the third party property damage and business interruption. The loss adjusters involved have estimated that approximately 500 separate property damage and business interruption claims have been recorded.

In most countries in Western Europe and Asia it is fairly common to have this type of trading estate within a kilometre of an oil depot or a very high hazard risk of this nature. This incident has highlighted some key points to be considered:

- We need to learn more about the exposures from surrounding risks, particularly if surveys of these areas contain limited information.

- Most of the buildings on the trading estate were built of a standard non-combustible metal frame and corrugated metal roof structure. Buildings built of more substantial materials such as brick or concrete would have incurred less physical damage.

- Caution should be taken when rating for this additional exposure to third party premises on trading estates located so close to hazardous risks.

The table below shows that these losses do not occur in isolation. High hazard risks of this nature have a major impact on surrounding businesses and communities.

### Business Continuity Plans (BCPs)

A number of surrounding businesses did not have contingency plans.

The effects of not having a business continuity plan (BCP) can prove to be devastating to third party companies.

Many companies within the blast zone were affected by the incident and had major problems due to losing valuable stock and data destroyed in the fire:

- Northgate Information Solutions, a billing service provider for various utility companies and local councils, announced the following day that their systems were “rendered inoperable.” Northgate were temporarily unable to service their customers.

- Asos, an online retailer whose warehouse was 700m away from the depot, was unable to access their premises. They requested that their shares be suspended from trading on the London Stock Exchange until further notice.

- McDonald’s, the food retailer, was supplied by one of its main distribution outlets on the Buncefield site. Some of their restaurants were affected by a loss of supplies.

- DSB International (Dixons and Curries – electronics retailers) closed their head office and relocated a staff of 1500.

### Other High Hazard 2005 Losses

<table>
<thead>
<tr>
<th>Date of Loss</th>
<th>Insured</th>
<th>Location</th>
<th>Total Loss (in m USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th Jan</td>
<td>Suncor Energy – Oil Refinery</td>
<td>Canada</td>
<td>800</td>
</tr>
<tr>
<td>7th Jan/24th June</td>
<td>Niko Resources – Gas Producers</td>
<td>Bangladesh</td>
<td>75.6</td>
</tr>
<tr>
<td>23rd March</td>
<td>BP – Oil Refinery</td>
<td>USA</td>
<td>1,000</td>
</tr>
<tr>
<td>13th May</td>
<td>Hongyanchi Power Generation Company Ltd</td>
<td>China</td>
<td>Unknown</td>
</tr>
<tr>
<td>15th June</td>
<td>Nefco – Oil Storage Facility</td>
<td>Russia</td>
<td>Unknown</td>
</tr>
<tr>
<td>24th June</td>
<td>Praxair Inc – Gas Cylinder Packaging Plant</td>
<td>USA</td>
<td>Unknown</td>
</tr>
<tr>
<td>14th July</td>
<td>BELCO – Utilities Plant</td>
<td>Bermuda</td>
<td>10/50</td>
</tr>
</tbody>
</table>

Source: Gen Re Research
The timing of the loss was also critical. Prior to Christmas, businesses were running their stock levels at their peaks, thus creating potential huge losses.

These events all prove the importance of having adequate, tested and maintained business continuity plans. It should be noted that those companies with the more elaborate BCPs were those who suffered the least impact. The director-general of the Confederation of British Industry (CBI) Sir Digby Jones commented, “everyone in business should be re-assessing their business risk...it is increasingly clear that many firms don’t have the necessary plans in place.” (Source: BBC News Monday, 2nd January 2006).

This incident has raised a few key points of importance:

- Having alternative customers and suppliers in order to remove dependency on any single supplier or customer.
- Companies should have alternative locations where they can switch production as soon as an incident occurs.
- Regularly test and maintain BCPs.
- Delegated personnel need to be appointed who can organise and respond quickly to a catastrophic event.
- Insurers and claimants need to ensure their claims handling operations have been tested and therefore run as smoothly as possible following a loss.

Many businesses that suffered building damage on the site have requested rebuilds in other areas away from Buncefield. This has affected the smaller businesses that remain at Buncefield, which service them. The Health and Safety Executives were also concerned with asbestos in some of the buildings. Delays also occurred since some companies did not have plans and drawings, building contractors were unable to begin repair work until the drawings were acquired from the original architects.

Comments
Ruptured pipe released hydrocarbon vapours that triggered the fire.

Two losses in six months. The fire lasted for two days. Flames visible up to 60m, 10,000 residents were evacuated.

15 fatalities, 170 injuries from the explosion. BP set to pay USD700m for fatalities and personal injury claims alone. Material damage claims of USD200m. BP held a self insured captive.

Unknown Five fatalities. Fire fighters took 2.5 hours to extinguish the fire. No information available regarding the third party premises.

Four facilities destroyed, 800 residents evacuated. Nearby business suffered serious disruption due to the blast and fires.

Flames over 45m, nearby homes and business were evacuated. Some cylinders were found 275m from the plant. Flying debris damaged local businesses, homes and vehicles. Praxair were said to be considering relocating the plant out of the residential area.

The third party losses were estimated to be USD50m as a result of the blackout. Fire crews took eight hours to control the blaze.
Lessons Learned

The Buncefield fire has proven the importance of insurance and how, as an industry, we should respond. Some lessons to be learned from this fire are:

- As underwriters we need to question the implications of taking on standard commercial property risks situated in close proximity to high hazard risks.
- Business interruption claims can be significant if business continuity planning is not taken seriously. Our role is to question those companies who operate without BCPs and help educate them as to the benefits of introducing them.
- The importance of having computers backed up daily and the information stored offsite plans and diagrams of the insured's premises should also be secured offsite.
- Periodic valuations on the property being insured and provide accurate business revenue targets to prevent discrepancies with policy limits and claims made.
- All material facts must be disclosed at the date of inception of the policy (or at renewal) to prevent any legal disputes once the claim has been submitted.

A major event such as the Buncefield fire proves that large losses can occur at any time. The more prepared we are for this type of event the less impact they will have on businesses, clients and insurers alike.