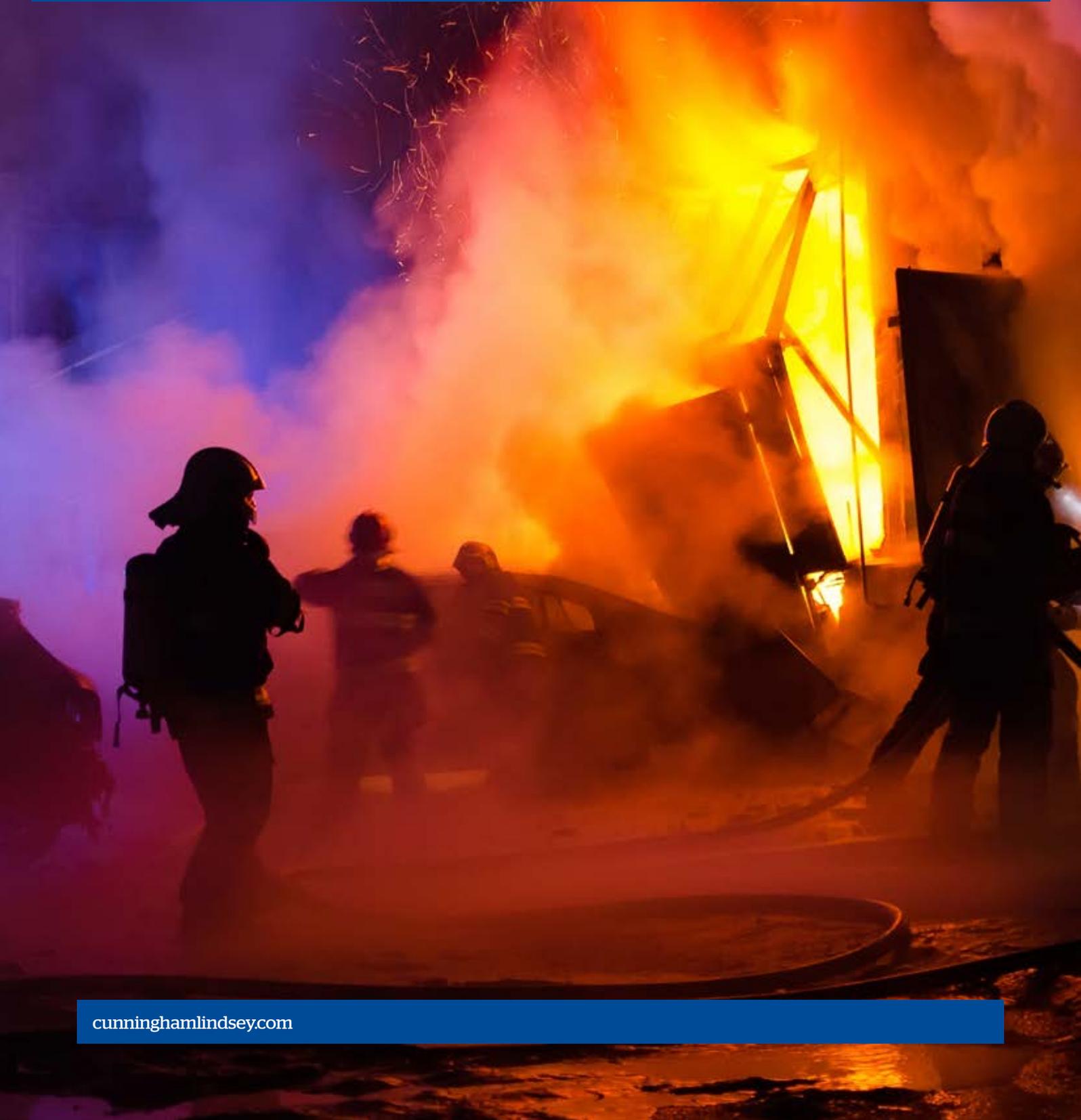


# Major & Complex Loss Review

2015



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# Foreword

Welcome to the 2015 Major & Complex Loss Review where we look at just a few of the most interesting and challenging losses from the last 12 months – giving you a bird’s eye view of the challenges faced by the policyholder and the solutions developed for them. The losses vary enormously, by country or by cause – but the key elements of the solution remain constant: the right person, in the right place at the right time.

Adjusting a major loss demands technical excellence, but this alone isn’t enough. Expertise is only effective if it’s delivered promptly, to the exact point of need – a theme reiterated time and again in our case studies. Whether a case needs an expert with in-depth knowledge of storing cocoa beans, the judicial complexities of France and Belgium or the historic value of a monstrosity – they usually need them as soon as possible. The ability to deliver that specialist technical capability – wherever and whenever – underpins everything we do at Cunningham Lindsey.

#### The right people

The professionalism must be delivered in person – and that person needs to react expertly to the evolving situation in front of them. A deep understanding of an industry or segment allows the adjuster to combine the specialist knowledge required with the ability to ascertain the individual priorities of each party, and empathetically deliver a technically correct settlement.

Professional development is a key part of this – both through formal training programmes and informal mentoring and development. We have a strong culture of hands-on learning, so that there’s always access to someone who has been there, and seen it, before. I recall very clearly the first time I attended a factory fire that resulted in a total loss with my then mentor. The lessons I learnt that day, and from a variety of subsequent fires over the years with other adjusters, were the foundations of the skills I bring to bear today in handling large complex losses.

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#### The right place

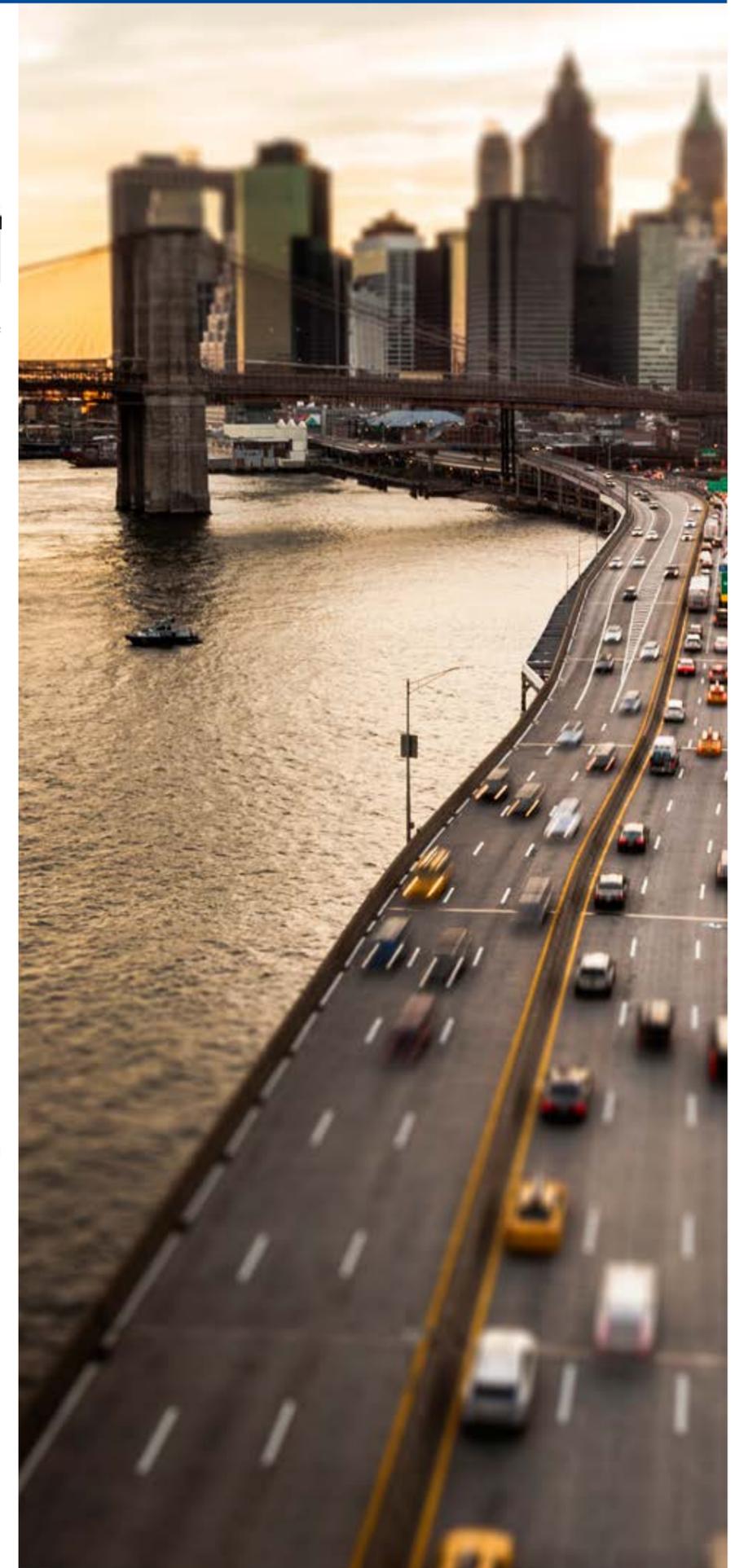
Many of the case studies in this report have another common element; a large number of stakeholders, often spread internationally with different cultural perspectives, operating across multi-jurisdictional legal, financial and regulatory environments. Many losses – such as pollution – don’t respect national borders.

The fact that we adjust losses from Acapulco to Adelaide and beyond, means we have a wealth of talent in our worldwide stable. Our Major & Complex Loss team has over 500 loss adjusters in 65 countries, so we have the reach, local and cultural knowledge to understand the issues you face.

#### The right time

The breadth of our offering in terms of specialism and geography means we can scale up wherever you need us. If the right expertise isn’t available in the region where the loss has occurred, we can put them on a plane and get them on-site within hours. When a week of storms turned the Australian state of New South Wales on its head, we had the flexibility and international resources to fly staff from New Zealand, the UK, South Africa and Canada to help with both property and business interruption losses.

As these case studies demonstrate, dealing with major and complex losses is the very opposite of a faceless, process-driven approach. The commercial angle to any major loss is a significant and delicate issue, with the policyholder and their insurer often having a differing understanding of the policy wordings or desired outcomes. As this year’s report illustrates, delivering the right solution requires a potent combination of the very best technical skills and industry specific knowledge across major losses and niche classes of claims, as well as specialist advice in key areas, such as forensic and environmental services.



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# Rapid response to Tianjin explosions

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At approximately 23.30 hours (15.30 GMT) on Wednesday 12 August 2015, a massive double explosion rocked the world's fourth largest port of Tianjin, some 170km southeast of Beijing. The explosions, which were so powerful they were registered as seismic activity, killed 173 people, injured hundreds more and resulted in damage as much as 10km away.

## The loss

At approximately 22.50 local time, a fire broke out in a warehouse occupied by Ruihai International Logistics, a company describing itself as a government approved firm specialising in the handling of dangerous goods. Although firefighters attended, as they were unaware what was stored on-site, their use of water to douse the fire inadvertently served to set a series of violent chemical reactions in motion.

The first explosion occurred at around 23.30 local time and was equivalent to detonating three tonnes of TNT. Shortly afterwards there was a second, more powerful explosion that caused most of the damage and injuries. This explosion was equivalent to 21 tonnes of TNT.

Three days later rescue efforts were hampered by a series of eight further explosions in the port as fire from the original blasts continued to spread. Tragically, 173 were confirmed to have died as a result of the explosions, with almost 800 people sustaining injuries.

The explosions also caused widespread damage. As well as blast and fire damage to property, thousands of new motor vehicles ready for dispatch from the port were destroyed. Damage was even reported to properties as far as 10km from the port.

## The response

As soon as news broke of the fire we mobilised a catastrophe team under the overall control of John Law, General Manager of Cunningham Lindsey China. Within days, we had a team of 30 adjusters on the ground.

Access to the port wasn't initially possible, because the Chinese authorities had secured the site and imposed a 3km exclusion zone around Tianjin. But this exclusion didn't stop us assisting clients. Our adjusters set to work dealing with claims primarily located between 3km and 5km from the blast site.

By the end of August 2015 we had received instructions from more than 15 clients to undertake inspections and assignments on their behalf.

At the time of going to print we were handling in excess of 130 claims for both the local and international insurance markets, ranging from \$50,000 to potentially several hundred millions of dollars. We also expect the number of claims to rise rapidly over the next few months.

## Finding solutions

Throughout this event we've drawn upon significant local and regional resources, including our major and complex loss and associated specialty practice groups. This has made sure our clients receive the appropriate technical expertise and the best possible service in these difficult times.

By using our experienced local staff, supported by regional expertise, we've overcome many issues around access and information gathering. In addition, by having a pre-approved network of technical consultants, we can give insurers from around the world the instant service they need.

For example, this technical expertise includes assisting in the forensic analysis of the potential contamination from the sodium cyanide that was stored at the port and has entered the sewer system, as well as other toxic materials that contributed to the blast. The long-term impact of airborne exposure to these chemicals needs to be considered when discussing any claim.

Our heavy presence on the ground coupled with our detailed and wide ranging expertise will assist insurers with their property and marine claims.

Having this support will help them unpick the complicated details of business interruption and contingent business interruption claims, that will arise on the back of the disruption to many global supply chains and enable them to meet their varied liabilities quickly, accurately and effectively over the coming months.

# Precious cargo

Cocoa beans are routinely shipped around the world to satisfy our appetite for chocolate. But, when a €3m cargo of these beans was caught up in heavy weather, it required technical expertise to properly assess both the nautical and cargo aspects of the claim.



## The loss

Heavy weather hit the container ship on Christmas Day 2013 as she made her way from the port of Tema, Ghana to her first discharge port of Tangier, Morocco. Among her cargo, the ship was carrying 54 containers belonging to a firm of Dutch traders. These held 1,500 MT of cocoa beans destined for Turkey and Estonia.

As a result of the rough seas, and a number of other factors subsequently uncovered by our adjuster, a total of 36 containers were lost overboard and a further 25 damaged, forcing the captain to change course and make for Algeciras, Spain where all of the containers on board were discharged.

In total, 18 containers of cocoa beans belonging to the Dutch traders were lost overboard and a further 16 were damaged.

## The response

We received notification of the loss on 3 January, a little over a week after it had occurred, and immediately set about co-ordinating a joint response from our local Iberian office and our Marine Specialist Practice in Amsterdam.

There were a number of factors that dictated the need for this combined approach. In the first instance it was important to have an adjuster on-site who could speak the local language and supervise the administrative and legal requirements of discharging and storing the policyholder's cocoa beans.

We also required specialist input to determine how to deal with the cocoa beans in the damaged containers. Unlike some inanimate cargoes, cocoa beans can be affected by heat, moisture and other atmospheric conditions and our marine specialists have an in-depth knowledge of how to handle these beans.

This expertise helped make sure the beans could be graded, sorted and stored

to maximise the percentage of the cargo that could continue its onward journey to Istanbul. In addition, this allowed us to achieve the best price in a salvage sale for the cocoa beans that remained in Spain.

But handling the discharged cocoa beans was only part of the adjusting process and a physical inspection of the container ship enabled us to determine all of the contributing factors in the loss.

## Finding solutions

Having applied his expert knowledge in regard to the cocoa beans, our adjuster set about assessing how the containers had been stacked on board the vessel. This inspection led him to discover that not only had the on deck stack limits been violated, but there were also issues with the weight distribution of the individual containers.

These factors made the containers much more vulnerable to damage and loss overboard in heavy seas.

The findings enabled the insurer's lawyers to make a claim against the ship owner on the basis that the bad weather alone hadn't been responsible for the loss. By proving that inappropriate weight distribution and violated stack limits had also contributed to the loss, the insurers were able to recover, from the ship owner, 80% of the €1m it had paid out to the policyholder.

Maritime losses require technical expertise to properly assess both the nautical and cargo aspects of the claim. In this case we salvaged part of the cargo and arrange onward transport to Istanbul, while achieving the best return from the sale of the remaining beans by grading and storing them properly in Algeciras.

Our nautical knowledge allowed us to identify the root causes of the loss and without a proper understanding of these issues it wouldn't have been possible to seek and secure financial redress for the insurer from the ship owner.

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## Container concerns

- A survey by the World Shipping Council (WSC), found that an average of 1,679 containers are lost overboard annually, representing an increase of 297% between 2011 and 2014
- The growing size of container vessels is impacting the scale of maritime losses and there are now more than 100 vessels with a maximum twenty-foot equivalent unit (TEU) capacity of over 13,000 units
- Vessels of this size make it difficult for insurers to understand their accumulated risk as agents from around the world book cargoes onto the same ship
- Salvaging large vessels is problematic as was shown when the Mol Comfort suffered a fire while at sea in 2013 and ultimately sank when efforts to bring her into port failed. This loss was detailed in the 2014 edition of our Major & Complex Loss Review
- Different cargoes require different handling. Cocoa beans are an example of a commodity that needs to be treated with expertise and sensitivity, both in transit and in the event of a loss

## Master Data

### Container ship



Built	2006
Size	212 X 30m
Draught	12.02m
Gross tonnage	28,592t
Net tonnage	14,769t
Deadweight	39,382t

# Standing up to the storm clouds

Rain, wind and hail spell trouble for insurers and this proved to be the case when a week of storms hit the Australian state of New South Wales in April 2015. As well as four fatalities, 12 communities were declared natural disaster areas by emergency services and 200,000 homes were left without power.

## The loss

From November last year to March this year, five major storms wreaked havoc across Australia. While the largest of these, a category five storm, Cyclone Marcia, is reported to have caused Au\$750m of damage, it turned out there was even more to come.

Just as Australia and its insurance industry were coming to terms with this wave of storms, bushfires and autumn cyclones, a barrage of rainstorms blew in. From 18 April, New South Wales was battered by rain, hail and wind that left an estimated 200,000 homes without power.

The storms also badly damaged the telecommunications network state-wide, leaving people in different areas without access to the internet, landlines or mobile phones.

## The response

We immediately realised the severity of the storms and the scale of the damage they'd caused so put out an alert to our international network for assistance. We particularly focused on getting help from colleagues in New Zealand, the UK, South Africa and Canada, because of the similarities between their claims handling processes and those in Australia.

This made sure incoming staff could hit the ground running when they arrived in Australia.

By calling in support from other parts of the business we catered for the volume of claims. As the storms had affected the communications networks, many residential and commercial policyholders were unable to notify us of their losses immediately. This meant that, as power was restored to the various networks, we were hit by a constant wave of daily instructions.

In total we handled more than 6,100 claims generated by the week of storms and a further 2,900 were received by Oriol, our in-house restoration and mitigation specialist business. These 9,000 claims were in addition to more than 7,000 jobs we had already received from the five previous major storm events - a total of almost 17,000 jobs.

The nature of these claims, ranging from small residential losses to multi-million dollar commercial losses, also demanded a varied response. For example, a ferocious hail storm at the end of the week saw a number of factories and warehouses sustain serious damage under the weight of the ice.

## Finding solutions

By putting out an alert to our international network for assistance, an extra 26 adjusters and three administration staff came to Australia to support us, all of them able to acquire the requisite Australian visa within five days of applying.

Having this additional manpower meant we could rapidly scale up the number of seasoned loss adjusters working in the country to cater to our CAT response needs.

We also received assistance with the response from other parts of Cunningham Lindsey Australia. These included Sergon Building Consultants, an in-house business with specialist building and construction knowledge including quantity surveying, and our financial specialists, Forensic Advisory Services (FAS).

FAS is an in-house specialist firm of forensic accountants and investigators that provides a range of specialist services including forensic accounting, economic loss quantification, financial analysis and valuation services to insurance, legal, corporate and public sector clients. FAS also brought in its New Zealand counterparts to assist with the large number of business interruption claims received.

The ability to call in expertise from around the world stopped us from having to hire expensive contractors and by using Cunningham Lindsey personnel we made it possible to provide a consistent quality of response to our insurers and their policyholders.

The proper use of all the skills within Cunningham Lindsey and our in-house businesses was essential to accurately adjust the glut of property and business interruption claims, demonstrating our ability to direct the appropriate expertise to where it was needed, even in the most testing of times.



### The April storms in numbers

**4** people lost their lives

**12** communities were declared a natural disaster area by emergency services

**200,000** homes in New South Wales were left without power

**312mm** of rain is what the county of Dungog saw fall in 24 hours. This was more rainfall than in any other 24-hour period over the last century

**35ft** waves were reported

**135km/h** wind was the rate up to which wind gusted

**19,950** requests for assistance were responded to by New South Wales State Emergency Service

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New Zealand is a close neighbour to Australia and it's only now recovering from the series of earthquakes that hit Christchurch in 2010 and 2011. Some of the adjusters we called in to assist in the immediate aftermath of these natural catastrophes are still in New Zealand today and, as the largest claims get settled, it's possible to see just how big an impact the response of our international network made.

The largest completed claim to date is for the University of Canterbury, which settled last year for NZ\$550m (US\$425m). The claim was for damage to 237 buildings. Other significant claims included the local civic authority, with over 1,000 structures; the government housing authority, with some 6,000 houses; and the public school system, with over 200 schools and more than 2,000 individual buildings.

Clients entrusted us with all of these large claims as well as many others each in excess of US\$50m.

Coping with claims of this quantum while handling extraordinarily high volumes of claims would've been impossible were it not for our diverse global network and the resources we could quickly pull into New Zealand. In total, more than 100 adjusters were drafted in from all over the globe and we also called upon the in-house expertise provided by various subsidiaries.

# Caught in the headlights

Full beam turned to fused when defective wiring caused motor headlights to malfunction. The German headlight manufacturer blamed its UK wiring supplier and we were called in to untangle the product liability loss and shed some light on the matter.

## The loss

Complex supply chains demand expert and international responses to product liability claims and this proved to be the case when defective wiring caused headlights produced by a German manufacturer to malfunction.

When the fault proved to be widespread the manufacturer pointed the finger at its UK wiring supplier, believing the issue lay with their component rather than the manufacturing process in Germany.

## The response

Instructed by the UK supplier's product liability insurer, we set about validating the circumstances surrounding the problem and identifying the root cause.

Immediately we touched base with our German colleagues and deployed a local adjuster to meet the headlight manufacturer and inspect their manufacturing process in person.

Being able to put an immediate physical presence on the ground gave us an in-depth understanding of the business and the wiring issue that it faced. We assessed the manufacturing process and the quality controls that were in place.

Having this presence in Germany also made it much easier to collect samples from the wiring manufacturer and explain exactly what samples were needed for testing. Our adjuster quickly secured full product and production data that assisted our traceability search and enabled us to pinpoint the reels of wiring that were faulty.

Working face-to-face with the German manufacturer, our adjuster secured samples in days and all of the requisite information in weeks, limiting the length of the loss and expediting our investigations.

Had communications for this sample material and information taken place by email and post it would've taken months to get everything required and been very difficult to secure at the first time of asking.

Tests proved the wiring was at fault and that defects were occurring randomly through the length of wiring stored on each reel.

The randomness of the fault meant the 1,000 metre reels were essentially useless to the German manufacturer.

Their automated process involved loading wiring reels into machines that fed out the length of wiring needed for each headlight. Not knowing where the faults occurred meant it wasn't possible to cut out defective sections or avoid using certain parts of the wiring known to be defective. As the faults popped up along its entire length at irregular intervals it was impossible to use.

To prevent scrapping all of the headlights already manufactured a test was devised that identified malfunctioning products and enabled the others to be certified for onward sale.

Again this would've been difficult to arrange and agree with the manufacturer had we not had our experts on the ground in Germany.

The product liability claim was accepted and settled for a relatively modest sum of £800,000, but the work we had done informed the insurer's decision to seek recovery of its financial losses from the US wiring manufacturer who had supplied the UK policyholder.

## Finding solutions

The random nature of the fault identified by the laboratory testing suggested the reels were defective by the time they arrived in the UK and this was further evidenced when chemical testing uncovered why the wiring was malfunctioning.

The insulated wiring was found to contain conductive fragments sitting between the internal wire and the rubber in which it was housed.

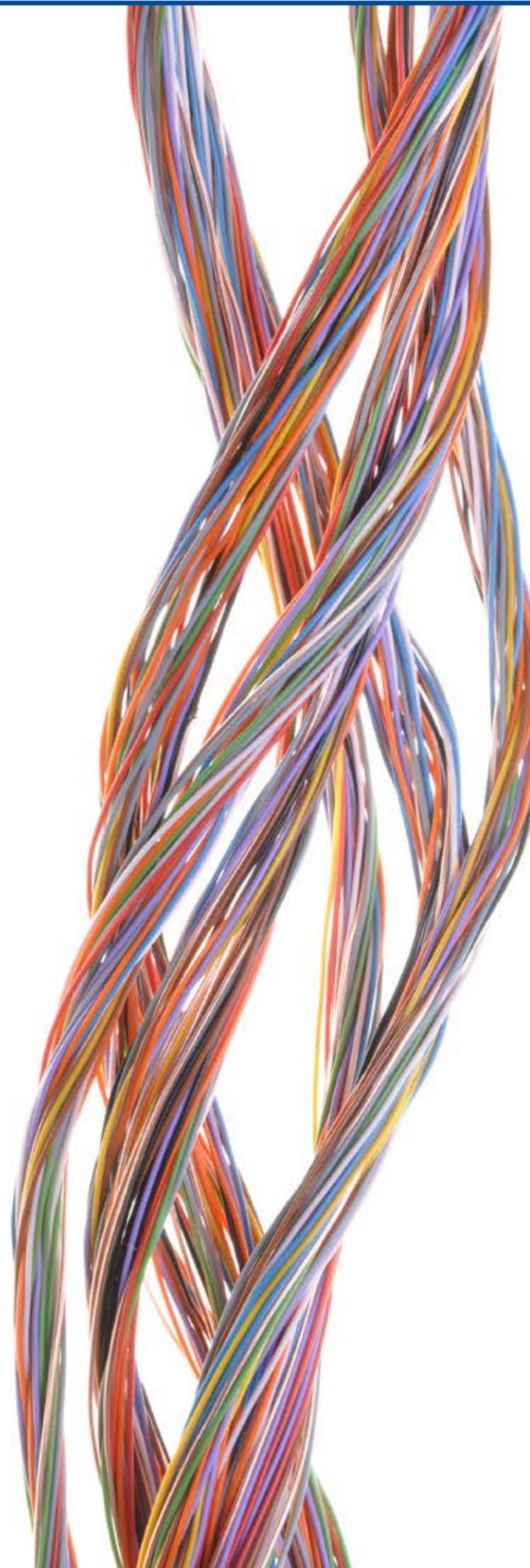
These foreign objects had the effect of thinning the depth of wiring that lay over them and, as the current passed through them, it melted the weakened layer of insulation causing the electrical fault.

The chemical analysis of these fragments identified them to be metallic and it became possible to show that they were shavings from the worn machinery of the US wiring manufacturer.

Having started initial discussions with the Colorado firm we presented our findings, but the manufacturer proved uncooperative and prevaricated at every turn. Eventually the business brought in legal representation and a process of mediation was suggested.

We instructed our own legal representative in the US, and it became clear that making any financial recovery was going to be extremely difficult. At no point during negotiations was the manufacturer's insurer involved and it appeared their coverage didn't extend to meet this loss and it would have to be borne by the company.

Unfortunately the company didn't have the financial strength to meet the claim and as the mediation progressed we realised it was skewed to the US manufacturer's advantage.



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Comment was even made that should the case go to court and be found in our favour the judgement wouldn't be enforced. In simple terms no US court would want to bankrupt a local employer for the sake of an overseas insurer.

In this stilted and unfavourable negotiating environment it was imperative to make a strong case and reach a settlement that was practical, reasonable and would ultimately be paid. We advised the UK insurer that making a trip to Colorado for the final round of negotiations would be unwise and instead conducted the meeting by telephone with only our US legal representative sitting at the table in person.

**The strength of our case made it possible to secure an out of court settlement for 50% of the loss paid out by the UK insurer and these funds have been received.**

The insurer was happy to avoid a court case and the additional investment of time and resource it would've required. It also viewed a 50% recovery as an excellent outcome given the irregularity of the US company's position, its lack of insurance and the potential for any court judgement to remain unenforced.

By managing the loss from the UK we used our own adjusters to meet with the German claimant and then take our scientific findings across the Atlantic to ensure a significant recovery for our insurer.

Without our scientific, international and detailed response the outcome would've been very different and a lot more costly for the carrier.



**Adjusting a loss through the milky whey**

New Zealand is home to the world's largest exporter of dairy products supplying 30% of the world's dairy exports. With revenue exceeding US\$19 billion and 16,000 employees, it is New Zealand's largest company, processing around 16 billion litres of milk each year.

On 31 July 2013 the dairy exporter was notified by a laboratory that samples from its whey powder (WPC80) had tested positive for Clostridium botulinum bacteria. These are capable of producing the most potent biological neurotoxins known to man.

The dairy exporter issued a worldwide recall of the affected 38 metric tonnes of WPC80 and found that it had been sold to third party manufacturers who had used it to produce more than 2,000 metric tonnes of infant formula, protein drinks, sports drinks and other beverages in Australia, China, Malaysia, New Zealand, Saudi Arabia, Thailand and Vietnam. Other countries, including Russia and Sri Lanka, not even supplied with the affected whey powder, closed their borders to the dairy exporter's product.

It was subsequently shown by further testing in the US that the bacteria present in its WPC80 wasn't the pathogenic Clostridium botulinum, but its genetic twin the non-pathogenic Clostridium sporogenes, which poses no food safety threat.

However, by the time this fact was known, the recall had taken place and the losses incurred. Claims from the dairy exporter's customers' exceeded NZ\$1 billion.

The dairy exporter's liability insurers appointed us to lead the claim investigation. Notification of the appointment was immediately sent to all Cunningham Lindsey's global offices to ensure instructions weren't accepted to handle the dairy exporter's customers' claims. This communication allowed us to avoid any conflicts of interest and also alerted our worldwide offices to be ready to offer assistance in quantifying and investigating third party claims on behalf of the dairy exporter's insurers.

The strong response we received from our offices demonstrated our ability to provide assistance anywhere in the world. A cause investigation team was assembled, involving two eminent professors of microbiology and a process engineer. A quantum team was also established involving forensic accountants from our Forensic Advisory Services teams in New Zealand and Australia.

Our co-ordinated global response and our ability to form comprehensive teams, comprising expertise across multiple disciplines to assess cause and quantum, facilitated the flow of information needed for insurers to make policy, liability and reserving decisions in a timely manner.



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# Still waters can run deep in modern real estate

Seemingly routine escape of water claims can lead to major losses and nowhere is this truer than in the residential real estate sector. Here, modern methods of construction can often hide the severity of a leak, with potential losses quickly running into six figures.

## The loss

Modern methods of construction go by the maxim that out of sight is out of mind. But while this can help to achieve the sleek, minimalist lines seen in property magazines, hiding away plumbing installations can make it difficult to ascertain the scale of water leaks on first inspection.

Particular construction methods can create problems with escape of water. These include:

- Plumbing installations concealed from view in service ducts or voids that are often difficult to access
- Raised floors comprising a concrete slab overlaid with joists or cradles and then a timber finish, creating a floor void that is often filled with insulation
- Internal partitions that bear off the raised floor

It's not uncommon for a water leak to affect several properties either. In recent years we've seen a growing number of claims where the policyholder at a single dwelling has reported a water leak that has actually affected multiple dwellings in the same building.

For example, in a recent loss we're working on, upwards of 15 properties have been affected. Although it was first assumed by the policyholder to be a single leak, when exploratory works were undertaken, it was revealed that there had actually been several leaks. In these cases what might at first seem like a four figure loss can quickly escalate to hundreds of thousands of pounds requiring extensive strip outs and months of remedial work.

Claims of this size are particularly the case in real estate areas at the higher end of the market. In these properties, premium grade finishes, such as bespoke kitchens and luxury bathrooms, will see significant reinstatement costs. Further, if people have to move out of their properties for an extended period of time, the cost of temporary accommodation quickly pushes up the value of the final settlement.

## The response

As a major loss adjuster dealing with a large number of these claims, our adjusters have gained the experience to look past the initial signs of water escape that tend to present as low level patches of damp or mildew.

Instead of approving what may seem to be minor repairs straightaway, we recognise the signs of what could be a much larger problem. Further investigation, such as exploratory trace and access work, may be needed and we might also introduce the specialist services of drying consultants.

This forensic approach helps to determine if water has tracked around the building and, for example, may be lying in voids under the flooring. It can also identify where water has moved through construction joints and affected other properties or parts of the building's internal fabric.

As well as the damage to the property, these situations can be extremely stressful for property owners. To minimise this, our adjusters combine interpersonal skills with the technical expertise needed to assist all parties.

## Finding solutions

Realising an escape of water claim isn't always as it might appear lets insurers deal with individual losses more effectively and better understand their reserving position at an early stage in proceedings.

To assist in the reserving process we have evolved our approach and instead of giving a single reserve figure that can change dramatically following further investigation, we immediately open up more involved discussions with our clients. These discussions detail the likely best and worst case scenarios, so they can understand their potential liabilities from the outset of a claim.

By applying our combination of expertise and experience to seemingly cosmetic water damage we make sure that larger losses are picked up immediately. In doing so we make sure the reinstatement work resolves the claim at the first time of asking. This reduces the overall case load borne by our clients and lets them settle such claims fully and promptly when they arise.



There are a number of key challenges presented by modern methods of construction in escape of water losses.

- Trace and access – where is the leak and is there more than one leak?
- How much water has escaped and to which parts of the building has it spread that are out of sight?
- Drying building elements which are difficult to access. In these instances it's often necessary to involve specialist drying consultants
- Difficulties in reserving on day one. Best case scenario could be localised damage, but the worst case could involve major strip out works
- Possible application of multiple policy excesses in the event of more than one leak
- Managing the investigation process, the programme, and reserves

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Escape of water isn't the only peril facing the real estate sector and our expertise allowed us to mitigate the loss and reduce the time to settlement in a major office fire in the South of England.

The four-storey office block went up in flames, causing extensive fire damage. The building also suffered significant smoke damage and heavy contamination from highly corrosive soot.

Items of plant had also suffered in the blaze and the immediate instruction of disaster recovery specialists enabled early assessment and professional cleaning to save most of this equipment.

We facilitated the early agreement of a negotiated package of works on an open book basis, instead of using traditional tendering methods. This cut the overall programme and made large savings on the substantial ongoing rent loss.

By agreeing phasing of the reinstatement work on a floor-by-floor basis, we achieved further rent savings by enabling partial and early reoccupation by tenants. Within eight months of the fire, the £4m reinstatement contract reached practical completion.

Overall, our proactive management of the loss and recognition of the key risk items helped our clients to realise savings in excess of £500,000 on property damage and loss of rent.

# No doubting the damage, but who's liable?

When a French waste management company found that sulphur was getting into its industrial machinery, causing material damage and forcing it to halt production, it pointed the finger at the Dutch supplier of its biological desulphurisation unit. But the international nature of this dispute made determining the appropriate liabilities much more complicated.

## The loss

As part of its business, the French waste management company used a biological desulphurisation unit supplied by a Dutch manufacturer to extract sulphur from the methane produced from the processed waste material. This clean gas was then piped in to power an engine and produce electricity.

But, within three months, it became clear the biological desulphurisation unit wasn't working effectively and the Dutch manufacturer was called in to make repairs. The Dutch firm accepted there was a problem and went on to make adjustments to the unit, so that it would operate as required.

But this was just the start of the problem. Following the repairs, the French waste management company insisted that sulphur wasn't being fully extracted and that the corrosive gas was damaging other parts of its electricity producing installation.

The plant was shut down to prevent further material damage and the production of electricity stopped. The French firm then issued a liability statement to the Dutch manufacturer.

## The response

We were appointed by the Dutch firm's insurer and adjusted the material damage loss to the biological desulphurisation unit. As a result, a settlement of €150,000 was paid out by the insurer to the Dutch manufacturer under the design cover it had in place.

**But this still left the material damage claim to the French firm's machinery and the business interruption loss that had resulted when it closed the plant.**

By issuing a statement of liability to the Dutch manufacturer, the waste management company had forced the issue into the process of judicial expertise, ramping up the number of parties involved and the overall cost and complexity of the dispute.

Essentially this process means the dispute is handed over to a local court to receive judgement from a judicial expert. The involved parties can only communicate through solicitors and if their representatives fail to attend meetings or step out of the process at any point they can lose their rights.

As an international business we had adjusters in both France and The Netherlands who could liaise with the Dutch policyholder and arrange physical inspection at the French site. We also called in the expertise of our Belgian colleagues, because they operate a similar system of judicial expertise and could offer valuable advice on how it should be managed.

## Finding solutions

Being able to call upon the experience and expertise of our Belgian and French colleagues made it easy to overcome the different languages at play and, because our adjusters held mechanical engineering qualifications, they also had the technical knowledge needed to understand all aspects of the loss.

The insurer we acted for hasn't accepted liability for the material damage caused to the French waste management firm's machinery or the business interruption loss that it's claiming. It believes the Dutch manufacturer was given inaccurate specifications before designing its bespoke biological desulphurisation unit.

**This has been verified by our own physical inspection, which coupled with our technical knowledge, enabled us to validate the Dutch manufacturer's position.**

By contrast the French waste management company has failed to supply information to support its claim.

This loss has demanded an international response peppered with sophisticated engineering knowledge and a detailed understanding of the legal system in France. By supplying this to the Dutch manufacturer, its insurer provided a robust cross-border defence.

At the same time we inspected, adjusted and agreed settlement under a design and construct policy for the material damage suffered by the Dutch company's biological desulphurisation unit.

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## Cross border claims

International commercial relationships and more complex supply chains make access to technical expertise that can cater for multinational losses and the demands of different legal jurisdictions mandatory. But it's not just industrial claims that can create issues and environmental claims often have a very international flavour.

Pollution doesn't respect national borders and where a plant is located close to other countries, understanding the impact this could have at the time of a loss is important.

Environmental legislation varies from country to country and this will affect the way an insurance policy responds. Where a toxic spill, for example, spreads across different countries there are examples of policyholders being left out of pocket for the clean-up costs in one nation, even though the insurer has paid for them in another.

The policy trigger is often the demand of national regulators for remedial action, but such remedial action isn't always mandatory under local laws.

When working with clients with sites located near national borders, pre-loss communication between brokers and underwriters will help establish a consistent and practical approach in the event of a claim.



# Calming the waters when a dam bursts

The Dos Mares hydroelectric plant, located in the province of Chiriqui, Panama, combines three run-of-river power plants with a total installed capacity of more than 115MW. During construction a number of landslides revealed underlying geological issues and, when the dam wall failed, the loss presented was in excess of a hundred million dollars.

## The loss

Construction on the Dos Mares hydroelectric plant began in 2008. As it was to be supplied with water from the Chiriqui, Cochea and Papayal rivers, a dam was built upriver to collect water from these three rivers. Although a number of landslides in the surrounding area uncovered the fact that the underground geological conditions weren't as expected, construction continued.

In 2012, a fault at the bottom of the dam wall allowed an ingress of water. As the dam filled and pressures increased, the rock surrounding the powerhouse crumbled and the dam was breached.

The single saving grace was that no-one lost their life, but plant and machinery worth millions of dollars were destroyed leaving the construction site in ruins and a complicated engineering loss to resolve.

## The response

In any major engineering loss it's very important to be on-site within hours to physically assess the situation and collect information, interview witnesses and obtain an initial impression. Leave this information gathering process too late and details can be lost as time passes.

We were at the site within 24 hours and continued to carry out weekly assessments during our involvement to gather accurate records of the damage and create a clear picture of the evolving loss.

Through our established global network we immediately commissioned a team of mechanical, electrical and civil engineers to examine the pre loss design and establish what parameters were used in the geological study and whether all the necessary certification had been completed confirming operation could commence. We also had another team of engineers, surveyors and inspectors responsible for assessing the post lost damage.

We found that the rock into which the dam had been built was much softer than the designs had catered for, and this was a factor in the failure of the construction.

Despite these issues, the London Engineering Group (LEG) engineering clauses prevalent meant the insurer was liable for consequential damage, even though it wouldn't have to pay out for the failed seal/water joint at the bottom of the dam.

## Finding solutions

To reach an agreed settlement, meant clearly defining the scope of the consequential damage and then quantifying and validating the values for each individual part of the material damage and delay in start up claims.

Our work in these areas enabled us to adjust the initial claim and reduce it by half.

We did this by using disaster recovery specialists and forensically examining damage to individual components of the loss.

As an example, the \$20m turbines were claimed as a total loss having been covered in debris but, on closer inspection, it was found they were actually undamaged. Engineers on-site had managed to close down the turbines prior to the loss, so the damage related only to cosmetic external cleaning of silt deposits.

In each instance we presented our findings and because of our technical expertise and the level of trust the policyholder had in us, they accepted our recommendations around possible avenues of restoration and repair.

It's common in major losses that during negotiations there comes a sticking point over which respective parties can fall out and negotiations have to move into the court room. But, the technical and mediation skills we offered, prevented this from happening.

Finding this solution was all the more impressive because unlike the UK, Panama doesn't have hundreds of years worth of insurance claims history supported by legal precedent and detailed legislation.

This lack of legal and historical data meant there were more grey areas to negotiate and it is testament to both parties that a settlement was agreed while insurers, reinsurers, brokers, owners, designers and contractors all remained on good terms.



The loss at Dos Mares hydroelectric plant highlights the conflict of interest that can arise between owner and contractor when covered by a single insurance programme.

Today, single insurance programmes on large construction projects cover all interested parties, although traditionally, separate policies were in place to reflect the different rights and interests attached to the owner and contractor.

In these instances it was standard to have an owner's policy and a separate contractor's policy issued by a different insurer. Structuring cover in this way may be perceived to better accommodate the fact that owners and contractors have different rights and responsibilities and that they are under different pressures. Where, for example, a contractor is working on a time and material basis they don't have the same incentive as the owner for a settlement to be reached quickly.

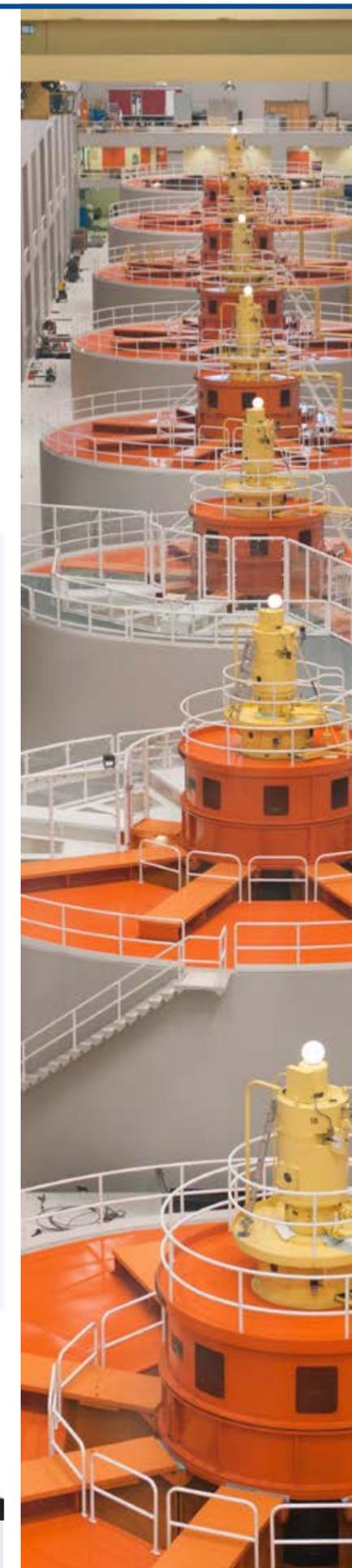
Separate policies also facilitate the general insurance principle of subrogation, but that isn't possible when everyone involved is covered by the same programme.



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# Fire in the hole

The clock was ticking when we were called upon to adjust a major fire at a 1,500MW power and water desalination plant that was under construction in the Middle East. A 60-day waiting period on the business interruption cover meant that unless the unit was returned to service swiftly, the loss would quickly escalate.

## The loss

The insured plant, a 1,500MW combined cycle gas turbine power and water desalination plant, was being constructed in the Middle East. It had two identical power trains, one of which had been handed over for operation but was within its 12-month extended maintenance period, while the other was still under construction.

The gas turbines run on natural gas, but use diesel as an emergency back-up. Periodically the gas turbines had to be fired on diesel to check the system was functioning properly.

During a changeover from natural gas to diesel a fuel pipe split, spraying diesel all over the hot casings around the exhaust. The diesel ignited sending a fireball along the turbine and into the ceiling of the turbine hall. This resulted in extensive damage to the fuel system, the control system and the wiring looms, as well as to the hall.

## The response

As a global loss adjuster we have a significant presence in this area of the world including offices in Bahrain, Kuwait, Cyprus and Saudi Arabia.

This meant we were on-site within 24 hours to conduct a physical inspection and set-up clear channels of communication with the contractor, plant owner, insurance broker, ceding company and London-based reinsurer.

The construction project insurance programme involved phased handover dates from an erection all risks to an operational all risks insurance cover, with delay in start-up and business interruption covers to consider.

*These policies were designed to be in place to cover the construction and initial operations of both generating power trains until the entire project had been successfully handed over to the client.*

We appraised potential coverage issues and immediately identified the 60-day waiting period on the business interruption cover as a priority. It was also important that we understood the contractual status of the machines, so that we could determine whether there was a potential delay in start-up loss, or if it would be a straight business interruption loss, because the unit was contractually operational.

The policy was subject to a LEG2 (London Engineering Group) wording that would exclude works that would've always been necessary to avoid the loss. So, it was important to understand exactly what had happened and identify the cause of the loss accurately.

This analysis entailed understanding how the gas turbines were constructed, so that we could determine which works would be subject to the adjustment and explain this clearly to the policyholder and advise the insurers accordingly. For this, we turned to our global in-house network of power specialists for their expertise in this area.

## Finding solutions

Our knowledge of gas turbine technology, as well as how the machine had been commissioned, supplied and constructed, helped us quickly identify exactly what items and data were necessary for the forensic inspection required to identify the root cause of the loss.

This insight also ensured we had the correct information to assess policy liability and carry out the correct adjustment, while not holding up the required repairs.



In addition we secured agreement from the policyholder and the insurer that an independent third party would carry out the root cause analysis work and both sides would accept its findings.

*By speeding up the decision-making process, and implementing and delivering on a tight repair schedule, we reduced the length of the outage by half and avoided what could've been two months of consequential loss.*

The gas turbine was producing 292MW, and its unavailability would've cost in the region of \$5m for a two month outage of the unit. This would've increased the total loss to around \$9m.

The root cause was later confirmed to be a problem with poor assembly of the turbine hot section casings that had been manufactured off-site. We determined that the claim was excluded from cover under the erection all risks policy section, but that liability did attach to the operational policy section. This meant it should be the contractor's, rather than the owner's, responsibility to pursue it.

The owner was happy to be relieved of any obligation to pursue the claim while our analysis of the policy showed the contractor that it was on risk under the operational section of the cover and could make a claim. The final loss was limited to \$4m. If the loss had extended for a further two months then it would have been in the order of \$9m.

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## Maintaining production at some of the world's biggest power plants

The Middle East is experiencing a large expansion in both industry and population. It's currently working on some of the largest projects in the world to increase its electricity generation and water desalination capacity.

Commissioning and testing takes place immediately before the hand over to the client and is a crucial time in the construction phase of a power station. At this stage the risk of a loss that will affect the initial operation of the plant is at its highest. The most common types of losses include fuel fires, failure of gas turbine rotating blades and generator failures.

Understanding the contractual position, commissioning procedures and nature of the loss are key in determining the extent of policy liability. Our experience in investigating the causes of power losses and our technical expertise of the technology and insurance issues involved mean we know what information is needed at the outset of a claim, so that no time is wasted.



## Top 10 construction power projects in the Middle East that Cunningham Lindsey has been instructed on or is the nominated adjuster to deal with all losses

Construction of:

**4,800MW** Abu Dhabi  
nuclear power station

**1,500MW** Abu Dhabi  
combined cycle gas turbine (CCGT) power station and water desalination plant

**1,600MW** Abu Dhabi  
CCGT power station and water desalination plant

**1,600MW** Abu Dhabi  
CCGT power station and desalination plant

**2,000MW** Oman  
CCGT power station

**2,800MW** Saudi Arabia  
CCGT power plant extension

**2,850MW** Saudi Arabia  
CCGT power station and water desalination plant

**2,000MW** Qatar  
CCGT power station

**2,730MW** Qatar  
CCGT power station and water desalination plant

**1,234MW** Bahrain  
CCGT power and desalination plant

# Analysing the financial minutiae of a mitigation strategy

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A severe storm in 2014 left a Korean tile manufacturer's production plant badly damaged. As some of its tiles could only be produced at that site, it faced an insured loss that could potentially run into tens of millions of dollars.

## The loss

The insured manufactured four different types of ceiling tiles at the affected production plant. Although three of these could be produced in its other premises, or acquired from competitors, a fourth was exclusive to the manufacturer and could only be produced at the damaged facility.

As a result, early estimates for the business interruption loss ranged from \$8m to \$12m.

Given this, the challenge was to mitigate the business interruption loss to best effect, so that the policyholder could continue to supply its non-exclusive tiles to market while also enabling it to resume production of its exclusive product as quickly as possible.

## The response

To assess available mitigation measures, Forensic Advisory Services (FAS) was appointed to the claim. FAS is an independent division of Cunningham Lindsey that specialises in the quantification of business interruption and financial losses.

Instructing forensic accountants at an early stage in proceedings makes it much easier to assess every possible option and make sure costly mistakes aren't made in the immediate aftermath of a loss. Having our own Forensic Advisory Services divisions means we can attend initial on-site visits or receive instructions to begin investigations within days.

## Finding solutions

Following a physical inspection and in-depth discussions with the involved parties, we concluded that the most effective way to mitigate the impact of the loss was to modify the production layouts at the policyholder's other facilities.

Altering the layouts at these sites enabled the manufacturer to continue producing the non-exclusive tiles and, by doing so, we guaranteed the company had enough output to meet market demand.

This strategy carried some associated additional transportation costs to guarantee the supply of raw materials and deliver the finished products to customers and these were factored into the overall decision.

Another option we considered was to source these non-exclusive tiles from competitors. However, our analysis showed that as well as being less economical, this option also carried the risk of commercial rivals getting a better understanding of sensitive intellectual property and details of specific product formulations.

**Given this, although manufacturing the non-exclusive products was more logistically challenging, it actually proved to be the less expensive option.**

The next concern was to reinstate the damaged production line that made the fourth exclusive tile and all of the repair efforts were focused on getting this part of the operation up and running again. This concerted effort saw the production line working within weeks rather than the months that had initially been estimated following the loss.

Once the production line was ready to resume operation we calculated that the most effective mitigation measure was to continue manufacturing the non-exclusive tiles at the other facilities for a few weeks, while solely dedicating the damaged

facility to producing the exclusive product to make up for lost production.

During this time all reinstatement works were concluded without affecting production lines any further.

As a result of these mitigation measures the insured managed to maintain its supply of non-exclusive tiles to customers from its own production lines. This was achieved by incurring additional transportation costs that were recovered from insurers as increased costs of working.

By maintaining production of non-exclusive tiles at the other facilities, the policyholder managed to quickly make up the production output that had been lost. The result was that the policyholder maintained market share and the impact of the incident was much lower than initially anticipated.

**Further, while early estimates for the business interruption loss had ranged from \$8m to \$12m, our intervention and the application of our mitigation strategy reduced this to \$5m.**



## Mitigation strategies

There are many mitigation options available, depending on the business and the nature of the loss, and they fall into two camps. There are measures to reduce the severity of the interruption and these include:

- Using temporary premises
- Adopting less efficient production layouts
- Installing temporary equipment
- Buying from competitors

Then there are measures that reduce the duration of the interruption and these include:

- Working overtime
- Hiring additional workforce
- Expediting transportation of critical equipment

When we try to shorten the length of a business interruption we always consider the costs and impact of the expediting measures available. There are normally decisions to be made, for example, between airlifting and shipping certain equipment, and repairing or replacing damaged units.

These considerations are particularly pertinent in losses involving specialised equipment that can normally only be repaired or replaced by firms working outside of the territory where the loss has occurred.

Where policies provide cover for additional increased cost of working this also increases the choices available by removing the economic limit that would otherwise apply.

Implementing the right blend of mitigation strategy requires in-depth financial analysis and it is this specialist expertise that Forensic Advisory Services offers, no matter where a loss occurs.

# All that glitters

When a piece of religious art worth €300,000 was stolen in broad daylight from a Dutch museum, it required the experience and knowledge of an expert loss adjuster to ensure the right outcome for all parties.

## The loss

Few passers-by paid much attention to a moped and its pillion passenger as they made their way through the winter streets of Utrecht. At least until it drew up to the side door of the Catharijneconvent Museum and the passenger started to smash his way through the plate glass with a sledge hammer.

People on the pavement thought the scene was being filmed for a movie, but it turned out they had ringside seats for one of the most brazen museum heists in recent history.

The museum is housed in a converted medieval convent and crashing through the hole in the glass, the robber quickly made his way down into a former crypt.

Knowing exactly what he was after, the sledge hammer made light work of the alarmed display cases. The thief shoved the €300,000 gold monstrance, an ornate vessel used to hold and exhibit sacred artefacts for religious ceremonies, into his bag and scampered back up the stairs.

## The response

Within hours of the theft our adjuster had been instructed. Unable to access the museum immediately while police cordoned off the crime scene and gathered forensic evidence, we were on-site the following day to carry out our own physical inspection.

Major and complex losses come in all shapes and sizes and this particular claim demanded an in-depth knowledge of the art world, specialist understanding of the objects involved, and an appreciation of the difficulties the thieves would have in selling them on.

Marc Tilro, our adjuster on this claim, has a degree in Art History and Archaeology from the University of Utrecht. He has a wealth of industry experience and has worked as an art consultant for McKinsey & Co, PwC and Christie's. He's also lent his services to Lloyd's and a number of its coverholders. His expertise in this niche area shaped our approach to adjusting the claim and played its part in the ultimate retrieval of the stolen monstrance.

Unlike the thieves, Marc immediately knew that the monstrance wasn't made of solid gold, but was actually gold-plated silver. He also knew that its encrusted diamonds were an old fashioned cut, making them less valuable than the robbers may have thought.

In short, the historic value of the monstrance was much higher than its street value and our adjuster advised the museum to publicise the heist in the media for two reasons. The first was to make sure the criminals realised their ill-gotten gains didn't have a high black market value. The second was to make it more difficult for them to sell the stolen goods.

But the missing monstrance posed another problem. As the robber made his escape and squeezed through the hole in the glass door, he had dropped part of it and didn't manage to get away with it intact.



## Finding solutions

The museum and its third party owner were left with a difficult decision. Did they scrap what they had in a bid to recoup some of their loss or did they wait to see if the rest of the monstrance would be recovered?

This was a delicate negotiation. If the part left behind had been scrapped and the rest of the monstrance was then recovered, the owner would still be left with an incomplete object. But if the stolen part wasn't found, how long should the policyholder wait for its return?

Given that the owner wasn't running a commercial business, didn't have cash flow constraints and the true composition of the monstrance had been well-publicised, Marc advised the policyholder and the insurer to sit tight.

They accepted his guidance and, a month later, it proved to be the right call. The thieves were picked up on their way to Antwerp and the monstrance was recovered.

Now the piece of religious art was back with its rightful owner, Marc really began to put his expertise to good use. One diamond studded section of the monstrance was never recovered and the main body of the object had been damaged and dented.

While the missing section could be copied from the piece that had been left behind at the scene of the crime, finding craftsmen able to create this replica and carry out the remedial work demanded specialist knowledge.

Calling upon his network of skilled artisans, Marc found one expert to make the replica section, another to repair the damaged monstrance and a third to source the right cut, carat and quality of diamonds required.

This third stage was crucial as the replica section had a total of 50 diamonds. Any mistake in matching their value to that of the original would've led to an inaccurate settlement for either the policyholder or the insurer.

At the outset of this claim it looked like the insurer would face a total loss of €300,000. But, by offering expert advice on how to progress the claim, and by instructing rarely available skilled craftsmen to carry out the repairs, the final settlement was a third of this – €100,000.

We pride ourselves on being able to handle not only the biggest and most technical losses, but also those that need niche knowledge and unusual skill sets.



National museums have always attracted attention from thieves, but that attention is switching more frequently to smaller venues and, in many instances, private museums. Regional museums, stately homes and manor houses are all being targeted for the wide range of private and public collections they contain.

In recent years the value of the collections in these smaller museums has risen considerably. Further, while security has always been a concern for the owners, they haven't necessarily invested in the same state of the art technology as the biggest national museums that hold the most famous pieces.

To make sure valuations are correct and security is appropriate it would be prudent for more underwriters to conduct pre-risk inspections. This would serve the dual purpose of eradicating underinsurance and, through increased security, prevent these smaller venues from becoming easy targets for criminals.

This is a service that we can provide or insurers can perform for themselves. Acting to strengthen these more vulnerable collections should be made more of a priority in the art world.

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The right person  
in the right place  
at the right time.



Cunningham  
Lindsey 

