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Practical solution in a pandemic

Over the last eighteen months, Sedgwick has handled several thousand major and complex losses across the globe. As COVID-19 brought a slowdown in many areas of global economic activity, large losses continued to occur – requiring an even more focused level of response than previously.

Sedgwick's teams of major and complex loss adjusters succeeded in finding effective ways to resolve our clients' claims whilst keeping everyone safe.

ACTING INSTINCTIVELY

For a business that's entirely focused on helping people and businesses in their time of greatest need, travel restrictions, strict social distancing and the various national and regional lockdowns initially created some real obstacles. In response, Sedgwick instinctively met each and every challenge with practical solutions that helped move the process forward – always prioritising the well-being of our colleagues, clients and customers.

Our extensive – and invaluable – global network of industry experts continues to provide exceptional, flexible support on a wider local level, even when restrictions prevent specific on-site inspections. All over the world, Sedgwick's digital developments have been fast-tracked, our operational structures adapted and enhanced.

ACHIEVING AMAZING THINGS

Together, we've achieved some amazing things; just a few are featured in this Global Major & Complex Loss Review. We look at several significant claims – some resolved during the COVID-19 crisis, all quite different. In each example, the underlying theme is how Sedgwick's wide range of professional and experienced experts across the globe have collaborated to great effect.

Throughout the pandemic, we've established safe and efficient ways of working together remotely, surmounting rules and restrictions to provide the continuity of high service levels that international clients and customers need.

We all hope the world will become a much safer place in 2022. But whatever happens, globally and locally, Sedgwick is a partner you can turn to and rely on to deliver better outcomes.



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UNITED KINGDOM | Chester Zoo

A monsoon forest fire

A major fire devastated the Monsoon
Forest biodome habitat at Chester
Zoo. While nearly all the animals
were saved, the loss ultimately created
a multitude of extraordinary issues for
insurers, adjusters and assessors to resolve.
From re-homing displaced animals to working
around man-eating crocodiles and a pregnant tapir
– everyone pulled together to create great outcomes
for all involved.

Saturday 15 December 2018, 11:25 am – a fire broke out in the 2,000m2 biodome at Chester Zoo. It quickly escalated, igniting an entire timber walkway, venting through to the roof and engulfing the polymer canopy. At the height of the fire, more than 15 fire engines attended.

While firefighters fought the blaze, zookeepers led the animals to safety. This included a group of critically endangered Sumatran orangutans, Sulawesi macaques, silvery gibbons, lizards, tortoises and various birds. Sadly, some frogs, fish, insects and smaller birds close to the fire outbreak died.

The blaze destroyed much of the biodome's roof and the aquarium tanks below, damaging public walkways, rain forest scenery, flora and fauna.

The building also suffered extensive smoke contamination. Forensic scientists later determined the most likely cause was an electrical fault.

IMPORTANT ATTRACTION

With over 1.9 million visitors annually, Chester Zoo is an important UK attraction, second only to the Tower of London.

Within the zoo's Monsoon Forest feature is a biodome, the largest zoological building in the country, and home to over seventy different exotic animal species. It has its own climate, maintained by specialist air conditioning, heating, misting, irrigation and ventilation systems, and various tropical plants, trees and shrubs, replicating rain forest conditions.

The biodome was severely damaged, creating a substantial, multi-million-pound loss, which immediately presented some unusual and unique challenges.

WORKING TOGETHER

MS Amlin, Sedgwick and Harris Balcombe were quick to respond, collaborating and cooperating to find the right solutions for all stakeholders.

On the day of the fire, loss mitigation was coordinated remotely until safe access could be secured. The very next day, Sedgwick's major loss team was on-site. And with proactive support from MS Amlin, on 21 December, just six days after the fire, policy liability was accepted.

From day one, we all worked closely together to secure damage management experts, specialist project managers, mechanical and engineering consultants and architects to assist with the various technical aspects of this claim.

More importantly, we also assisted in organising the appropriate long-term care for the displaced animals

BIODOME REINSTATEMENT

Chester Zoo's biodome is a nonstandard building, and we appointed the original construction contractors to make sure reinstatement works were carried out efficiently.

They inspected and reinflated the canopy's northern end and covered the damaged area. The roof trusses were removed, cleaned and repainted, and roof pillows renewed. The timber-clad public walkways, tunnels, viewing stations, animal netting and a treehouse, had to be repaired or reinstated.

We appointed specialist contractors to assess, refurbish or replace the biodome's complex environment management systems. We also managed the impact of COVID-19 so that any delays to the general reinstatement works were minimal.

While the biodome building repairs were technical and specialised, a few other very different challenges had to be resolved.

IN BRIEF

Biodome caught fire

In one day the team was on site

In six days
policy liability was accepted

Interim payments substancial and timely

•••••

Custom solution

The animals specific needs were taken into account during repairs

Expedited

plans to build three additional animal houses

Day one reserve

Claim settled extremely close to and within the day one reserve

Great outcomes
everyone worked together



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Given the complexity of both the building and the zoo's operations, we were extremely pleased that the collaborative approach undertaken by MS Amlin, Sedgwick and Harris Balcombe resulted in a smooth claims process and the best outcome from what were very challenging circumstances.

Liz Carnie

Corporate Director, Chester Zoo

CARING FOR CROCODILES

Many animals had been traumatised by the fire, and the emergency move to new accommodation. Their ongoing welfare needed careful consideration. The zookeepers have an extremely close relationship with their animals and were consulted before any works were carried out.

For example, two crocodiles, too old to tranquilise and move, had to remain in the biodome's lake area while building repairs were carried out. Watched over by armed zookeepers, the scaffolders, suspended from a crane above the lake, had to carefully install a temporary crash deck – to protect the crocodiles from falling debris and the workers from the crocodiles!

AND A PREGNANT TAPIR

Works also had to be carefully phased around a pregnant tapir, which could be easily upset and possibly abort. Overhead roof repairs were carried out early in the morning or overnight when the tapirs were locked away. She successfully gave birth during the project.

The temporary accommodation that the zoo had found for many displaced animals was only suitable short-term, and so we hired specifically adapted cabins as a longer-term solution. The zoo already had approved plans to build three new animal houses pre-fire, and we expedited this scheme to provide further options.

TROPICAL PLANTS

A vast collection of replacement tropical trees and plants were ordered from various growers worldwide, costing over £380,000.

Unfortunately, lockdown issues meant that this consignment had to be held over in Holland for a few weeks, and we had to organise local short-term greenhouse storage.

We also replaced a vast range of damaged specialist items, such as animal tanks, aquariums, water pumps and motors, air compressors, bird and botanic exhibits.

COVID-19 IMPACT

Chester Zoo reopened all unaffected areas to the public just two days after the fire, and visitor numbers remained unchanged during the project.

That was until COVID-19 restrictions caused the zoo to close.

Of course, care for the animals had to continue, so only 25% of zoo staff could be furloughed – the zookeepers and their support team remained on-site, full time. To ease the zoo's cash flow, we made sure that swift and substantial interim payments were made regularly.

CREATING GREAT OUTCOMES – FINAL CASH SETTLEMENT

The reinstatement of Chester Zoo's Monsoon Forest Biodome feature completed 22 May 2020. Mid-June 2020, a cash settlement, accurate to the day one reserve, was mutually agreed. This jointly led solution was productive for all parties.

MS Amlin, Sedgwick's major loss specialists and Harris Balcombe provided the expert hands-on support that Chester Zoo needed to deal with a vast range of urgent and extraordinary challenges.

Throughout the reinstatement of this highly specialised building and its rainforest habitat, we cared for the animals' welfare while managing lockdown issues. Policy liability was accepted within six days of the loss, and interim payments were substantial and timely. Working together, we settled this multimillion-pound claim to everyone's mutual satisfaction.

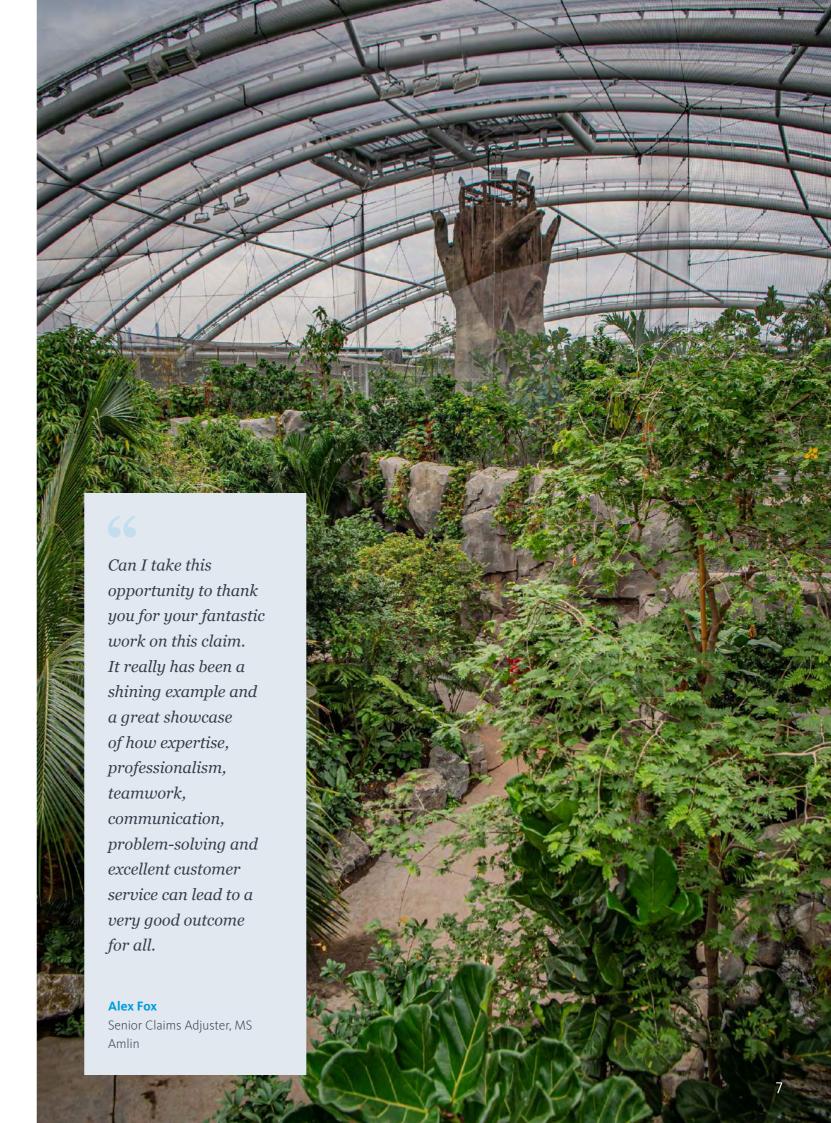
We created great outcomes for Chester Zoo.



ANDREW CAVAN

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Cancellation crisis

COVID-19 caused the cancellation or postponement of many public events worldwide, not least of which — and for the first time since WWII — the 2020 Summer Olympics. In many countries, event organisers looked to individual brokers and insurers to discuss potential claims, but in the Netherlands, nearly every event policy is managed centrally through one broker — Klap No Risk.

Shortly after lockdown measures were introduced on 15 March 2020 in the Netherlands, Dutch brokers, Klap No Risk received a deluge of enquiries from clients, all looking for advice on how to proceed with potential event cancellation claims.

COMPREHENSIVE COVER

The history of event insurance in the Netherlands goes back to 2009. Klap No Risk (then trading as Klap) identified the need to bridge the gap between the creative people – who very successfully organise huge annual festival events – and the more business-like issues of risk and the required insurance cover for those rare occasions when things go wrong.

Klap worked closely with underwriters and came up with a policy that met the specific needs of the local events market.

The Netherlands hosts between 1200 and 1500 festivals a year, more per capita than any other country in the world, and that excludes concerts. Over the years, Klap No Risk has become synonymous with local event and party insurance, and they aligned with Sedgwick as their appointed claims surveyors. Claims generally, right up until March 2020, were minimal and primarily due to a storm, flood or fire compromising the venue, or occasionally an artist not being able to perform.

Then COVID-19 brought the world to a standstill, severely impacting every major public event. Klap No Risk's event cancellation policy included pandemic cover, and suddenly, hundreds of enquiries were coming in from local event organisers.

NOBODY KNEW

The situation was unprecedented. In February 2020, the COVID-19 virus was spreading rapidly across Europe, and we knew it would inevitably hit the Netherlands.

At first, the situation didn't look particularly serious, but in March, it got much worse – suddenly, we were facing a global pandemic.

At the beginning of April, the Dutch government announced new rules regarding forthcoming public events, but Easter was just two weeks away, and traditionally, that's when the festival season starts. A couple of big events, expecting 50-60,000 attendees, were scheduled to be held during this period, and organisers didn't know what they should do. At that stage, the government hadn't formally announced that major public events couldn't go ahead, so if the organisers' cancelled, they couldn't make a claim against the pandemic cover on their insurance policy. But for every day they delayed this decision, the costs of cancellation were going up. It was an extraordinary situation - no one knew what their options were, and event organisers went into a flat spin.

WHAT HAPPENS NEXT?

And this was the burning question. Approximately 80% of almost every event budget is spent in the last month before it takes place, so at what point should organisers abandon their plans?

Customers were asking, 'If you say it's OK to go ahead, will we be covered if we then have to cancel'?

They warned that if we said yes, then more money would be spent, and any last-minute cancellation would make it far more expensive for insurers. They also wanted to know what would happen if they postponed the event for six months. If they still can't continue as planned, will they be covered? But at that early stage, no one actually knew whether they could proceed under the same policy.

As the year progressed, restrictions gradually started to ease in many areas across Europe. This encouraged organisers to think that some events might go ahead, but ultimately this proved impossible. For example, one major event organiser postponed a concert four times, but inevitably, every date had to be cancelled.

HANDLING CLAIMS

In the Netherlands alone, we received over 500 event cancellation claims, ranging from huge functions such as the Dance Valley Festival, which attracts 30,000 people a day, to corporate incentives, weddings and larger family celebrations. The volume of queries and subsequent administration was overwhelming.

IN BRIEF

COVID-19 cancellation

All major events cancelled worldwide

1200-1500 festival

hosted in Netherlands annually

Immediate enquiries

Klap No Risk inundated with enquiries

Policy

Event cancellation policy included pandemic cover

500 claims

Had to be managed

14 claims surveyors

deployed by Sedgwick

Forensic accountancy

4forensic accountants from
Sedgwick's FAS team collated and
inspected thousands of different
contracts and helped event organisers
resolve issues

Settling

Most claims are now settled

Future proofing

Event organisers advised to look at future contracts closely and report budget amendments to insurers



Sedgwick quickly appointed fourteen specialist adjusters and claims surveyors with the right expertise and experience to deal with this type of work. They were supported by four forensic accountants from our forensic advisory services team (FAS). All the original event contracts, often involving dozens of different sub-contractors, had to be gathered and inspected.

CHALLENGING THE CONTRACTS

Many venues argued that they were open and ready to host the prebooked occasion, large or small, so what was the problem? But organisers were not prepared to go ahead with the event if it couldn't be held in the spirit and on the originally planned scale. However, venues still expected cancellation penalties to be paid.

The contracts were various for venues as well as the many different subcontractors – lighting, marquees, generators, bars, electricity, technicians, food vendors, DJs and artists who were unable to travel – the list was endless. We had to investigate every single contractual obligation between the parties.

FINANCIAL CONSEQUENCES

Hotel bookings were another issue, and one of the largest claims involved a major sporting event. Well in advance, organisers had pre-booked all the athlete's accommodation, blocking out rooms in nearly every hotel in The Hague, and many properties insisted they would not refund any deposits.

Every claim was different in detail and complexity. The Sedgwick team kept in close contact with all parties, reporting back to insurers and Klap No Risk on the financial consequences of cancelling each event. Many organisers found themselves in severe financial difficulty, and we had to provide support wherever possible and work to help them resolve short term cashflow issues.

Maarten van Denderen, of Klap No Risk in Amsterdam worked closely with March Schuling and the rest of the Sedgwick team. He said:

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We were extremely impressed by the way Sedgwick handled this event. In next to no time, they had the capacity and expertise in place to manage this growing catastrophe. They always had the right specialist on hand to help organisers work things out, and they really knew what was going on – both with clients and insurers. They made sure everything was handled exactly as it should be.

LESSONS LEARNT

While the COVID-19 crisis continues, most event cancellation losses in the Netherlands have now been settled. And handling such vast volumes of this type of claim, it became very evident that although all these major event organisers are absolutely brilliant at putting a party together, in future, they may decide to put a greater focus on the various contractual obligations and the general conditions that apply.

Also, every large event is structured against a strict budget, and organisers very often forget to report to insurers when costs have substantially increased. This can prove difficult and disappointing if the event is cancelled and the sum insured is out-of-date.

AND THE FUTURE?

The Dutch caretaker government has set up a subsidy scheme that's designed to stimulate event organisers to start re-planning concerts, trade fairs, congresses, festivals, sporting and other public events. Should they then have to cancel due to COVID-19, the government will pay 80% of the costs incurred, with the remainder available as a loan at a favourable interest rate of 2%. It's reported that these support funds could total as much as €385m.

The event must take place before 31 December 2021 and does not apply to new events held for the first time. Another qualifying condition is that the event must have previously held cancellation insurance.



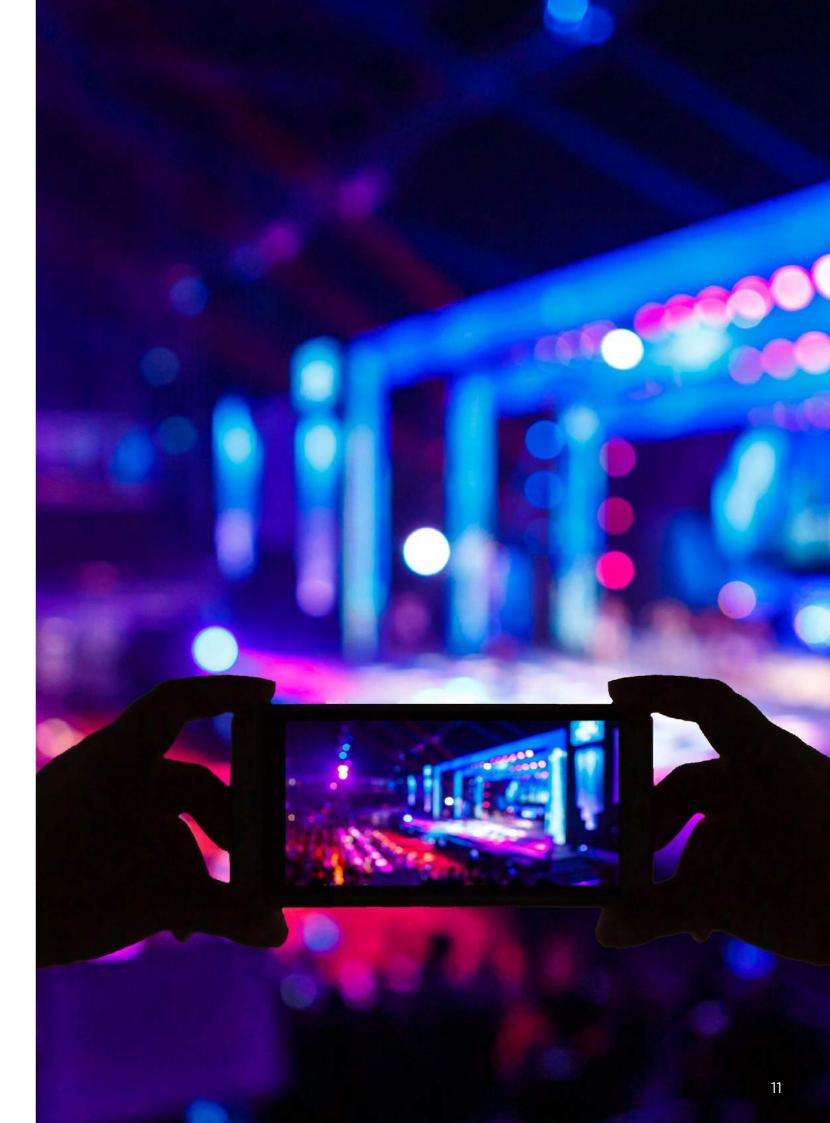
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AUSTRALIA | Cargo crisis

APL England

Last spring, the APL England cargo container ship met bad weather off the coast of New South Wales. Within hours, Sedgwick's marine team was appointed to manage the claim. Quick and decisive actions by a skilled team of local experts, using intelligent remote technology to investigate the incident, enabled more than 250 cargo claims to be settled in just nine months.

24 May 2020, en route from China to Melbourne, the captain of the APL England was warned by the Australian coast guard that the ship's current course would take them directly into an approaching storm. Then, during heavy seas, about 73 kilometres southeast of Sydney, the APL England experienced a temporary loss of propulsion.

While power was quickly restored, the ship had already begun to roll, causing some container stacks to collapse and slide off the deck into deep-sea waters. With widespread damage to more than 130 containers left on board, The Australian Maritime Safety Authority (AMSA) redirected the APL England to Brisbane as its port of refuge.

Over the next three days, as the ship limped towards Brisbane harbour, it became clear that its containers stored hundreds of different products. From urgently needed personal protective equipment (PPE) to machinery, stationery, paints, motor vehicles, furniture and foodstuffs – each container's loss or damage impacted the hundreds of insurers involved.

COVID-19 DELAYS

The COVID-19 shutdown of international borders and a surge in demand for retail goods also led to various global bottlenecks, so by the time the APL England arrived in Australian waters, it was already late. Clients expecting to receive their shipment in Melbourne were now faced with further delays, while their goods were held up thousands of kilometres away.

The maritime and logistics market was, and still is, under pressure, as there are not enough containers available to travel from China to the rest of the world – particularly Europe and North America. So, the APL England's containers were in high demand, which placed unprecedented trade pressure on insurers.

APPOINTED SOLE SURVEYOR

Australia's leading marine insurance specialists, National Transport Insurance (NTI), received notification that the APL England had lost more than 50 cargo containers overboard.

With so many insurers involved, NTI coordinated the appointment of one law firm and one surveying company to the investigations on behalf of other marine cargo insurers in the Australian insurance market.

With an established excellent track record, Sedgwick was appointed sole surveyor.

RAPID ACCESS

Once the APL England was in harbour, NTI-appointed lawyers enabled rapid access to the ship. According to Sedgwick's head of marine, Margot De Villiers:



This is unusual as normally you wouldn't be able to gain access for a few weeks. However, the fast actions of the NTI-appointed legal team got us on board within five days as soon as the vessel was made safe. That's when the real nitty-gritty was uncovered.



NTI appointed
Sedgwick because they
know our capabilities
and trust us to deliver.
Prior experience with
our marine team gave
NTI the confidence
that we could manage
the process. And we
delivered.

Brad Mountford,

Head of business development

Our marine team was the only cargo surveyor present at the first inspection of the containers at the port and, as this incident occurred at the height of the COVID-19 hard lockdowns across Australia, flying in teams of experts wasn't an option. Instead, we undertook traditional onsite surveys and used satellite tracking technology to investigate critical voyage and vessel data.

With offices in all major ports in Australia, the entire Sedgwick marine team worked remotely with the onsite surveyors to bring a wealth of diverse skills and years of experience to each of the claims arising from this shipping disaster.

POOR SHIPPING DOCUMENTATION

Initially, poor shipping documentation made it difficult for our surveyors to identify the missing containers, amongst the 134 declared damaged.



Many of the ship's clients were asking, 'Is my container in Brisbane or the ocean? If it's here, how badly damaged is it?' We were dealing with very anxious people.

explains De Villiers.

The definition of damage was wideranging, from a slightly bent corner post or top rail to huge dents and gouges. If a container was gouged, it was likely to have water ingress, and if a container was squashed, it was likely the items inside were broken.

IN BRIEF

250+ container claims

resolved in 9 months

Sedgwick

as sole marine surveyor

Onboard within 5 days

as soon as vessel was safe

Minimal delays

in critical first inspections

Quick

gathering and sharing information

Marine surveyors

viewed all containers

Apps and video

used to record details of the claims

Unpacking/repacking

containers significantly reduced

Time-sensitive and urgent freight handled first

Mitigated further losses

Inadequate lashing

found after investigation

15 deficiencies

found after AMSA inspection

AUD\$22.5 million in environment claims

against the APL England

Master to be prosecuted in Australia

Our marine surveyors quickly viewed all the containers and noted details about the damage to each and its contents.

FAST ACTIONS

These rapid external assessments enabled our surveyors to immediately inform insurers of the condition of their clients' containers and hold discussions with shipping service providers. This led to a significant reduction in the actual numbers of containers that had to be unpacked/repacked, with our marine surveyors in attendance. And when all other cargo had to be reloaded into new containers, every effort was made to mitigate further losses.

Preliminary reports were sent out to insurers, solicitors and the final destination surveyor, updating them with the new container details and what to expect on arrival.

The team then contacted each client to let them know when the container was to be reloaded onto a vessel for final transit and, if required, one of our marine surveyor would be available at the destination port. This completely coordinated approach was a massive benefit of the sole surveyors set-up.

ESTABLISHING CAUSE

With widespread damage to more than 150 containers, our investigation then focused on whether the cargo had been appropriately stacked and secured onboard the ship. The team immediately found evidence that a large part of the securing gear used to secure these 30-tonne containers was rusted, corroded and, in places, falling apart.

Further inspection found inadequate cargo lashing arrangements and heavily corroded securing points for containers on the deck.

This physical evidence was assessed alongside the ship's documentation, such as logbooks and plans for general arrangement, stowage, lashing and stability. The evidence we uncovered was crucial, and it gave the insurance market confidence to pursue its claims.

POOR WEATHER OR POOR CHOICE?

Bad weather plays a significant role in the damage and loss of shipping containers every year. Other important factors are bad stowage, poor maintenance, improper supervision and handling. Sedgwick's investigation determined that a combination of all these factors caused the APL England incident.

Sedgwick's lead investigating surveyor commented:



We understand that the captain *went against the advice of the* coast guard and chose to sail into developing bad weather rather than around it. As a result, the ship got stuck in some seriously hostile waters.

APL ENGLAND ARRESTED

Based on our findings, Australian Maritime Safety Authority (AMSA) boarded the APL England to check that it was seaworthy. A ship needs only three deficiencies to prevent it from sailing - AMSA found 15.

AMSA arrested the ship under the Protection of the Sea Act and the Navigation Act and issued a AUD\$22.5 million fine for pollution caused in Australian waters. The master of the APL England was also charged in Brisbane Magistrate Court for offences relating to pollution and/or damage of the Australian marine environment as a result of poor cargo loading.

EXPERTLY HANDLED

In a sizable claim of this nature, each insurer generally sends in their individually appointed expert, creating multiple claimants under one vessel claim. What makes this incident unique is that NTI appointed Sedgwick's marine team as the sole surveyor to manage the myriad of complex claims it entailed. And one company representing the cargo interests avoided various approaches from many small firms, all asking the same questions.



Our initial challenge was to get all parties involved to agree and not appoint their own surveyors," explains De *Villiers.* "The fact that we were able to secure more than 85% of claims within the claim demonstrates that our marine surveyors expertly handled the process both during the crisis and throughout the subsequent claim process.

JUST NINE MONTHS

From the outset, we worked closely with the NTI-appointed legal team. At every stage, they worked cohesively together to make the claim process simpler for everyone.

Our marine surveyors were proactive from start to finish, driving claims from mitigation to conclusion in just nine months. Time-sensitive and urgent freight claims, such as PPE consignments, were handled first. Such efficiencies were due to the collaborative effort of the team working in tandem with master mariners to thoroughly investigate the cause of loss.



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Investigating the Miami FIU Bridge failure

Thursday, 15 March 2018 – during the construction of the Florida International University (FIU) pedestrian bridge, a 53-metre section collapsed. Tragically, six people died, and ten were seriously injured. According to a statement released by the university, the bridge was designed to last 100 years and withstand a Category 5 hurricane – what went wrong?

Situated eleven miles west of downtown Miami, the FIU bridge was to span an eight-lane highway and the Tamiami canal, providing a safe walkway between the city of Sweetwater and the Florida University campus.

Part of the FIU University City
Prosperity Project, the bridge was
a dramatic sculptural design, styled
to look like it was cable-stayed, with
a pylon tower and high cables – but
was actually a two-span, single
plane, concrete truss construction.
There were many unique features
about this complex structure – in
fact, it's reported that "no other
designs similar to the FIU bridge"

ACCELERATED BRIDGE CONSTRUCTION

The bridge was built using the Accelerated Bridge Construction method. In this process, large parts of the structure are constructed offsite so that the bridge can be installed quickly, often within a matter of days. The main span of the bridge was 53-meters and weighed 950 tonnes.

The canopy was supported by diagonal concrete truss members, reinforced using steel bars and posttensioning (PT) rods, which were attached to the deck in cold joints.

Two days before the collapse, the engineer of record (EOR) became aware of a significant crack at the intersection of truss member 11 with the deck at the north end of the bridge. At that point, this was apparently not thought to be an immediate safety issue.

Then, on 15 March, at 9 am, while under the span of the bridge, a university employee heard a loud cracking sound. At 1:47 pm, the truss at the north end experienced a blow-out, and the main span of the bridge started to sag deeply before suddenly dropping over 5.5 meters onto the road below.

A video camera, fixed to a construction pickup truck travelling towards the bridge at the time, recorded the whole incident.

TIMING IS EVERYTHING

Following a structural collapse such as this, timing is everything. Our engineers are onsite immediately — catching the first available flight — to begin sifting through the damage. The scene may look like piles of rubble and debris to an outsider, but to trained engineers, it's a treasure trove of evidence that can be used to determine the cause of failure.

A forensic investigation often begins with taking photographs and documenting evidence before the scene is disrupted or evidence cleared. In the case of the FIU bridge collapse – which sadly involved loss of life – search, rescue and recovery efforts can sometimes delay the collection of physical evidence. In these instances, aerial and drone video footage can provide an early overview.

IN BRIEF

Bridge collapse

Fatal FIU pedestrian bridge collapse

Complex design

Complex and unique sculptural design constructed using
ABC method

two day before

cracks were identified,
no action taken to cease works

In-depth enquiry

US NTSB enquiry concluded engineers made load and calculation errors

18 civil lawsuit

filed against 25 businesses

Case is ongoing

Complex and impactful

Collapse investigations are complex and massively impact how cover is applied and losses shared



FORENSIC INVESTIGATIONS

To determine what has happened, forensic engineers have to grapple with some complex questions when investigating a collapse of this magnitude. It's important to understand the many factors that contribute to a complete forensic investigation, as these findings can have a multi-million-dollar impact on the way insurance cover is applied and losses shared.

Soil and material samples might need to be collected. Even early press reports or weather readings can offer valuable insights as initial hypotheses begin to form. As engineers follow the evidence to home in on the cause, they may analyse maintenance records, architectural or engineering design drawings, construction plans, and material laboratory tests. These documents contain valuable clues as the evidence begins to mount.

LITIGATION

Depending on the technical complexity and scope of loss, forensic investigations of a complicated structure can take weeks, even months, to complete. Reports and findings must be validated through a thorough peer review before they can be shared.

Attorneys and senior adjusters at insurance carriers frequently rely on these reports as part of their coverage analysis. Many large, complex losses become litigated, and findings are viewed by judges and jurors. In other cases, our engineers are deposed for pending court cases based on what they have learned over the course of ztheir investigations.

POOR JUDGEMENT

An in-depth enquiry into the FIU bridge collapse by the US National Transportation Safety Board (NTSB), it was concluded that the probable cause was load and calculation errors made by the bridge engineers. These miscalculations were also not picked up in the peer review. The NTSB enquiry also highlighted other factors that exacerbated the severity of the incident, which included the engineers' failure to cease work on the bridge and take appropriate action – such as closing the highway to traffic – when the cracking of the structure reached unacceptable levels.

A total of 18 civil lawsuits were filed against the 25 businesses involved in the FIU pedestrian bridge project – the case is ongoing.

HUMAN ERROR

From our experience on similar, high profile collapses, the cause of loss can be as varied as the structures themselves. In this instance, structural collapse was attributed to a defect in design – in others, failure might be due to poor construction or faulty materials. The building process itself can be risky, as the different construction stages can make the structure highly vulnerable.

Extreme weather conditions, such as hurricanes, tornadoes, floods or freezing temperatures can result in partial or complete failures. Even general rainwater can cause deterioration over time, and ultimately, lack of proper or scheduled maintenance can contribute to structural failure.

Human error, flawed calculations – as in the FIU bridge collapse – and gross misjudgement might also be contributing factors.

EVERY STRUCTURE HAS A STORY

Many of these questions can't be answered without expert training, advanced skills and proven experience. And, surprisingly, there are a limited number of specialist engineering firms and professionals capable of providing the high level of in-depth technical analysis and investigations that these large, complex losses demand.

Every building, bridge and complex structure has a story to tell. And when the worst happens, our job is to make sure we understand their language, based on the clues and evidence they present.

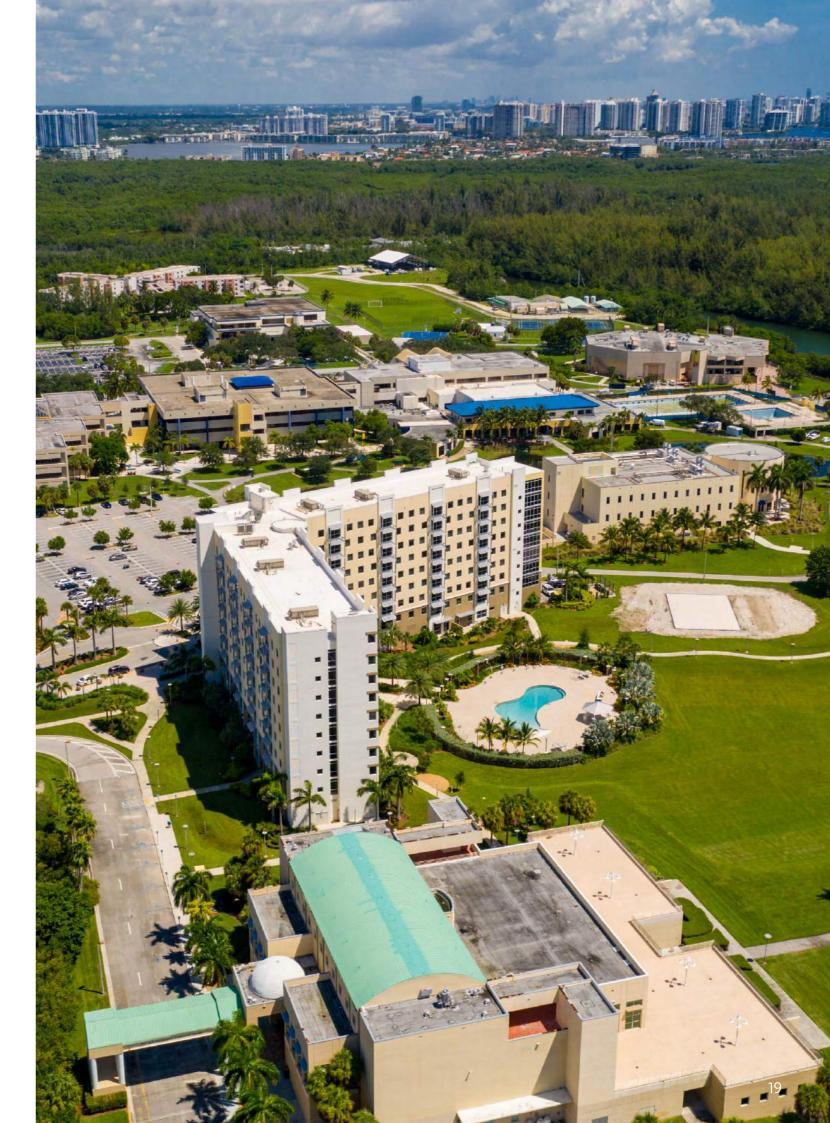
In May 2020, plans were announced to rebuild the FIU pedestrian bridge, with design works starting in 2021.



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BRAZIL | Processing paper

Getting to the root cause

Brazil's largest producer and exporter of paper and packaging identified defects in a newly installed US\$50 million steam distribution system. The issue was uncovered during a production shutdown when routine maintenance was carried out. This US\$21 million claim was complex and highly technical, involving detailed scrutiny of the design and engineering of a state-of-the-art purpose-built system, alongside the policy wording to determine whether cover would operate.

A major paper and packaging manufacturer commissioned the installation of a new steam distribution system. It was specifically designed to meet the increasing requirements of their industrial cellulose pulp production process and generate electrical energy for the entire plant.

The insured acquired the system in a modular format, which enabled them to take advantage of the best technology at the most competitive rates. With several suppliers and sub-contractors involved, the insured carefully sourced and appointed a specialised management company to coordinate the entire engineering and installation project. They then reported and worked closely with their own technical team.

Regular operation of the new system began in March 2016.

In the first few months, there were numerous operational breakdowns, and a deformation of the highpressure collector was noted, which was thought to be due to the water hammer effect

(when the natural build-up of condensation in the steam lines suddenly expands and generates a knocking noise).

Although technically normal, the insured decided to evaluate any non-apparent damage during their 2017 shutdown.

FURTHER INVESTIGATIONS

A third-party engineering company then carried out tests on the high-pressure collector and identified cracks in five welded joints. The engineer believed it to be an isolated, one-off issue but suggested that the insured investigate the possible cause further.

Repairs were subsequently carried out, and the incident wasn't reported to the original manufacturers, the system installation project management company or insurers.

The testing engineers didn't find any defects in the welded joints, but following their recommendations, the insured decided to carry out a full inspection of the high-pressure collector during their 2018 shutdown.

On this occasion, the insured's technical team found the previously repaired welds now had cracks, which suggested a bigger problem. One of the joint connectors needed completely replaced, and further evaluation of the lines revealed an 80% failure rate on the inspected welded joints. At this point, the insured contacted their insurance company.

SPECIALIST ENGINEERS

Sedgwick's major and complex loss (MCL) team in São Paulo was appointed to the loss, and specialist engineers were immediately sent out to investigate the problem. Repairs to the damaged line had enabled production to continue, albeit at a lower rate, as the system could only operate at a reduced temperature and pressure. This meant that actual downtime was around five days, which kept business interruption costs to a minimum.

The team quickly established with the insured's representatives that the focus of the engineering assessment would be on the main joints (approximately 200 of them), comprising the main turn-generator steam line, pressure collector and turbogenerators. They also requested a complete set of technical documents, produced when the steam lines were manufactured and assembled, for evaluation.

S METALLURGICAL WEAKNESSES

Extensive laboratory material tests were carried out on the joints, and the results were conclusive.

An independent expert, retained by the insured, confirmed that the irregularities in all the original welded joints were down to poor engineering welding practice, all of which had been completed by one of the contracted companies. Additional audit results also identified incorrect or poorly documented practices, increasing the risk of metallurgical weaknesses, such as the existence of discontinuities.

Comprehensive repairs to the defective joints, which would render the system fully operational, were technically possible, but would take at least six months and would substantially impact the business turnover of the unit.

IN BRIEF

Largest producer

Brazil's largest producer of paper and packaging products

US\$21m potential claim

Serious defects in newly installed steam line system resulted in potential US\$21 million machinery breakdown claim

Commissioned tests

MCL adjusters commissioned tests on defective joints establishing the cause to be poor welding at design and build stage

Investigations

Exhaustive investigations into policy cover

Technical

opinion presented to insurers

Partial cover

Cover operated in some aspects of the loss

Compensation

insured is seeking compensation for BRL\$40m shortfall from contractors and to recover 100% of claims costs

Pivotal

Our findings and evidence will be pivotal to the outcome

assembled, for evaluation.

The potential losses were projected at around BRL\$600 million (US\$114 million).

REPLACING SYSTEM

Based on extensive economic feasibility studies, the insured opted to replace the steam system by building a new line alongside the damaged system while it continued to operate.

Although the manufacture and assembly of the new steam line would result in high installation costs, this was easily justified when compared to the potential financial losses.

WHO PAYS?

Expert material analysis had enabled us to identify the root cause. The issue now was to establish whether the insured's policy for machinery breakdown cover would operate.

Our strategy explored and exhausted every possible angle of the incident and compared it to the policy definition and interpretation of accident, event, loss and material damage.

After extensive deliberation, it was thought that cover would be triggered in part under the Special Machinery Breakdown Clause. However, we concluded that this would not extend to failure or errors that occurred during the construction, installation and assembly period.

These issues and defects were directly attributable to the companies hired to carry out this work.

There was no doubt that the insured had contracted the entire installation project to be overseen by a specialised engineering management company. Ultimately, though, it was the insured's responsibility to make sure the contractor followed the scope of activities – as anticipated and necessary for implementing the system – and that they were carried out correctly, respecting the pre-established project design, applicable technical standards and maintaining good engineering practices.

It was a highly technical and complex scenario, and our detailed technical opinion on policy liability was presented to insurers, which was also subject to analysis by the retained law firm.

COMPENSATION

This steam system is the most modern in the insured's group, and the complexity and technical magnitude of the investigation was evident from the outset.

The claim process was extensive and involved the participation of various companies, mainly those responsible for the construction process of the steam line system. We also worked closely with specialists and experts within Sedgwick's EFI Global and FAS Global forensic accounting teams, as well as the insured's legal representatives.

The insured was able to recoup a substantial percentage of their costs through salvage and other aspects of their insurance cover, including business interruption. However, they are now seeking compensation for the BRL\$40 million (US\$7.6 million) shortfall from the contractors who managed the design, manufacture and installation of the poorly engineered steam system.

Insurers are supporting the insured's action and are also entering into proceedings to recover 100% of the costs they incurred in settling this substantial and complex claim. The information and evidence that we uncovered during the course of our investigations will be pivotal in building a watertight case against the project management company and their sub-contractors.



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A growing global issue

Defra reports that COVID-19 is driving a 37% increase in food fraud cases globally. Worst hit are spirits, wine and honey, and they predict that the situation could be even worse. In the UK alone, food and drink is a £200 billion business, and like any major industry, it's vulnerable to a wide range of criminal activity.

Food crime – also referred to as 'food fraud' - is often only recognisable when it directly impacts Netherlands, published in October you or those close to you. Yet, there are many examples of this growing problem, as those inclined to flaunt consumer safety frequently create opportunities to gain pecuniary advantage.

The Food Authenticity Network was set up in 2015, with funding from the Department for Environment, Food and Rural Affairs (Defra). They report that the COVID-19 pandemic is causing a rise in global food fraud.

Analysis by the network found that there has been a 37% rise in food fraud cases, taken from both official sources and media reports when comparing the first half of 2020 to the same period in 2019.

The worst-hit categories were spirits, wine and honey. Adulteration cases increased by 30%, and counterfeit incidents by 47%. However, they predict that the situation could be even worse, given the current reduced regulatory oversight globally.

Research by the Wageningen Food Safety Research Institute in the 2020, also found that food supply chains were increasingly vulnerable to fraud due to the disruption caused by the pandemic.

INTERPOL

The issue has even reached Interpol. Jürgen Stock, Interpol Secretary-General at the time said:

As countries around the world continue their efforts to contain COVID-19, the criminal networks distributing these potentially dangerous products show only their determination to make a profit. The scale and variety of food and drink seized serves as a reminder for members of the public to be vigilant about what they buy, and the need for continued vigilance and action by law enforcement.

WHAT IS FOOD CRIME?

It's the deliberate misrepresentation of food and drink for financial gain. It can lead to a serious risk of harm for consumers, and in brand terms, financially impact businesses and the wider food industry. It occurs in various ways, ranging from isolated acts of dishonesty by individual offenders to organised illegal activity coordinated by criminal networks.

There are seven basic food crime techniques:

Adulteration – an extraneous substance is added to a food product, reducing its quality. This is done to lower the cost or fake a higher quality product while increasing volume.

Substitution or dilution - part or all of a food product is replaced with a similar substance without necessarily altering the product's raw characteristics. Or a cheaper alternative is added to a high-value ingredient, therefore, diluting it.



IN BRIEFS

COVID-19

Driving 37% increase in food fraud globally

Target

Worst hit are spirits, wine and honey

Adulteration

cases increased 30%

Counterfeit

cases increased 47%

Vulnerable

UK's £200 billion food business is vulnerable

Costs

Food crime costs UK food industry £11 billion annually

NFCU

formed following 2013 'horsegate' scandal as the law enforcement function of FSA

Risk

Food illegally entering the human food chain creates reputational risk for insurers

Best practice

Verifiable proof of destruction is best practice before settling claims November 2018 —
a honey producer in Corsica
was charged concerning
substitution. Cheaper imported
honey was mixed with the
honey produced in Corsica and
was then marketed as pure
Corsican honey, despite being
a blend.

Misrepresentation – a product is labelled or marketed to portray its quality, origin, freshness or safety incorrectly, or the product or ingredients are illicitly produced as replicas of a genuine product. This deliberate act of deception claims that a product is something it's not, usually for economic gain.

"Organic" food is a type of food misrepresentation that's on the rise. The substitution of cheaper, non-organic ingredients misrepresents the product to the consumer.

Theft – food or drink misappropriated by illegal means for use or sale resulting in a profit.

Livestock theft and unlawful processing are key concerns in red meat, specifically, how the resultant product enters the food chain and reaches consumers. Potentially, this activity can lead to unsafe and untraceable food being sold, posing risks to human health.

The financial benefit from the theft of livestock is only gained through the onward sale of the product. Several food crime methodologies are subsequently employed to get meat from stolen livestock to market, including unlawful processing, misrepresentation and document fraud. Food crime within the red meat sector remains an emotive issue.

Unlawful processing – unapproved premises or unauthorised techniques used usually during the slaughter and preparation of meat.

Document fraud – using false documents to sell or market a fraudulent product.

Waste diversion – unlawfully diverting food, drink or feed meant for disposal back into the supply chain. And this is an area that can frequently involve insurers.

IS FOOD CRIME NEW?

Food crime isn't anything new. Previous high-profile cases include:

- 2009 disgruntled worker spread peanuts around a nut-free factory
- 2013 activist group threatened to maliciously contaminate major food and drink brands with hydrochloric acid
- 2018 reports of needles hidden in strawberries in Australia



There are two main drivers behind food crime – malicious contamination and financial gain – and the latter is by far the biggest motivator.

TEA LEAVES

We can cite many claims involving some of the techniques mentioned above. For example, we recently assisted insurers with the investigation of a case involving a huge volume of tea leaf crop. Prior to processing, the stitched canvas sacks used to carry the product were unpicked, the contents removed and substituted with similar, inferior plant material and re-stitched to conceal the adulteration. The effort to achieve this task required considerable motivation at the source.

MALAYSIAN 'MEAT CARTEL'

More recently, a Malaysian 'meat cartel', that has reportedly been operating for the past 40 years, was exposed for forging halal documents – passing off and distributing horse or kangaroo meat as halal beef. A similar issue plagued the UK prison service in 2017, and the meat suppliers were subsequently imprisoned for five years.

MELAMINE

And in 2010, Chinese food safety officials seized 64 tonnes of raw dairy products contaminated with up to 500 times the maximum allowed level of the toxic industrial chemical melamine. Use of the product killed six babies and made a further 300,000 very ill.

The businessmen in question were either imprisoned or executed by the Chinese Government.

TRACEABILITY IS KEY

When managing food and beverage product liability claims, there are two key areas of interest – quality and traceability – but traceability is key. To uncover the, what, where and how, you really have to follow the product. It's time-consuming and requires disciplined experts, who know the subject, but this is the only sure way to determine how big or small any potential liability event might be.

To get to the root cause of the issue, you need wider technical resources with particular skills and expertise. For example, we're seeing an increasing number of dairy claims, which we can match with insurance professionals who are ex-dairy farmers and agriculturists.

We also have many other food sector specialists – microbiologists, chemists and engineers – who are frequently involved in deep-dive product liability investigations. Their extensive knowledge and experience allow us to carry out detailed root cause analysis in-house and in the shortest possible time frame.

FOOD CRIME AND THE LAW

Food fraud is explicitly covered in Regulation (EC) No 178/2002 of the European Parliament. This regulation outlines the general principles and requirements of food law.

The Food Safety Act 1990 provides the framework for all food legislation in England, Wales and Scotland. The Food Safety Order 1991 provides a similarly for Northern Ireland.

Under these regulations, food businesses are required to guarantee that what they sell to the public is of the quality or substance that the consumer is led to expect. But, crucially, they must also ensure that food is advertised, presented and labelled correctly not to mislead customers.

In today's globalised marketplace, protecting consumers from food fraud is an intercontinental task. There are multiple bodies in the UK, including the FSA and NFCU, who share information to help prevent fraudulent activity.

HOW DOES IT HAPPEN?

For food crime to happen, there has to be vulnerability in the food supply chain. There are three key components that give rise to food crime vulnerability:

- Opportunity which depends on two things:
 - Ease to commit the crime
 - Difficulty of detection
- Motivation Common triggers are financial benefit, cultural influences, and behavioural factors.
- Absence of control measures
- If a food fraudster recognises the opportunity and is motivated to commit food crime, then lack of suitable control measures will create the opening.

The missing control measures might include fraud monitoring and verification procedures, supplier auditing, quality control, whistleblowing guidelines and protection, and legal enforcement.

WHEN DOES IT OCCUR?

Food crime can occur at any stage in the food supply chain. From the early stages – such as harvest, manufacturing, packaging, and distribution processes – until the preparation and serving of the final food product. However, it's most likely to occur close to the start of the supply chain, as more opportunities exist, with less chance of quality control.

NATIONAL FOOD CRIME UNIT

The National Food Crime Unit (NFCU) was established in 2015, following a review of the horsemeat scandal that shocked the UK in 2013.

This is possibly the most notorious example of food fraud in recent years, where some foods advertised as beef products, were found to contain horsemeat – as much as 100% in some cases. To this day, it's still uncertain as to precisely where this fraudulent activity began. It could have occurred with mislabelling during the supply or manufacturing process stages, but it's incredibly difficult to determine.

The NFCU is a dedicated law enforcement function of the Food Standards Agency (FSA), and they define food crime as serious fraud and related criminality in food supply chains. This also includes activities impacting drink and animal feed that can be harmful to consumers, food businesses and the wider food industry.

According to the NFCU, food crime costs the UK food industry £11 billion a year. However, tougher legislation and increasing public awareness is making it harder for criminals to get through legal loopholes. If anyone knowingly commits food fraud, the consequences can include prosecution, resulting in fines and possible jail time.

HOW DOES THIS AFFECT INSURANCE COMPANIES?

Food deemed unfit for human consumption, including food written off by an insurance company, can sometimes find its way back into the human food supply chain.

Food that's thought to have been destroyed can be sold to unsuspecting businesses and consumers through various channels. If this food is then illegally placed on the market, the insurance company risks suffering reputational damage.

Such is the concern about the growth in this area of crime, the NFCU approached Sedgwick to assist in widening their relationship across the insurance market.

They wanted to alert product insurers to the emerging risks relating to written-off products re-entering the supply chain, and encourage a robust regime of validating scrapped product and the disposal process.

A recent case in Ireland highlighted how food that was due to be destroyed was smuggled back into the food chain, which clearly demonstrates the potential risk for insurers.

BEST PRACTICE IS:

- Request verifiable proof of destruction before settling a claim
- Understand and verify what's going to happen to food afterwards
- Food brokers must be registered with the local authority's environmental health service.
- If you are concerned that food unfit for human consumption has entered the supply chain – inform the necessary authorities.
- Any suspicions or information about food crime, contact the National Food Crime Unit – food.crime@food.gov.uk



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The worst wildfire in NZ history

A wildfire caused extensive damage to the remote area of Lake Ohau, wiping out almost half of the properties in the village. The swift actions of adjusters and insurers, supported by smart drone technology, enabled claims to be assessed quickly. Within just one month of the disaster, over 95% of claims were resolved.

On Sunday, 4 October 2020, a major wildfire tore through Lake Ohau Village in the Mackenzie Country, New Zealand. With gusts of up to 60 kph, howling winds caused hot spots, flare-ups and ember transfer, fanning the spread of the fire across to nearby conservation land, local farms and countryside. The intensity of the fire completely consumed any buildings and properties in its wake, leaving limited timber remnants of the structures.

Eleven helicopters and nine ground crews attended, and firefighting teams battled to stop the blaze from damaging critical infrastructure, including the main power lines servicing Queenstown and Wanaka.

Around 50 properties were destroyed, forcing some 90 people to evacuate their homes. The fire burned through around 5,040 hectares, including 1,800 hectares of conservation land. No one was harmed, but tragically, at least 300 sheep and lambs were killed. The Lake Ohau fire was one of

the biggest ever wildfires in New Zealand, with insurance costs exceeding those of the 2017 Port Hill fires and 2019 Tasman District fires.

A FOREIGN DISASTER

While New Zealand has experienced wildfires in the past, none have been as intense as recent cases in Australia. Because New Zealand isn't as expansive or arid, and towns are mostly surrounded by farmland rather than bush, there's not the escalation of wildfires on the scale and intensity seen in Australia; we rarely see widespread damage to residential property.

While some privately owned forested areas have been affected previously, there's only ever been two large bushfires in New Zealand that caused significant numbers of domestic insurance claims. The first was the Port Hill fire near Christchurch, which lasted between February and April 2017.

The second was the recent blaze that destroyed almost half of Lake Ohau village.

TECHNOLOGY IN DAMAGE ASSESSMENT

Because of the intensity of the Lake Ohau fire and the extent of the damage, Fire and Emergency New Zealand (FENZ) cut off access to the site until they could determine that there was no loss of life, and that the area was safe to enter. Strong winds were an ongoing complication, spreading debris across the village and putting people at risk.

As soon as the wind abated,
Sedgwick had drones in the air to
assess the scale of the loss and
locate insured buildings. The quick
availability of this information
allowed us to collaborate with the
origin and cause investigation team
and start identifying the parts of the
village that had been damaged.

We also
began requesting
property files from local authorities
before setting foot in the village to
physically inspect the damage.

This enabled us to provide early feedback to insurers, who began checking their records to determine if they had properties insured in those areas and could take a proactive review of the damage. This approach by insurers was invaluable as, at that point, some customers, particularly those owning holiday homes, might not have known whether their property was affected.

ORIGIN AND CAUSE INVESTIGATIONS

The claims we received were predominantly for damage to residential homes, with just a few commercial claims.

An essential part of a loss adjuster's work is to coordinate with origin and cause investigators. We

share a collaborative approach to investigations, allowing joint inspections with the various parties, and this ensures that an accurate record of cause is established.

The investigators gained access to Lake Ohau well before the public or any loss adjusters were allowed on-site, and our close working relationship enabled us to preview the type and scale of the damage. This meant we could provide insurers with an early interim claim review report and an indication of the claim value relative to the respective sums insured.

LOCATION CHALLENGES

One of the first key challenges was that Ohau is quite remote. Queenstown is reasonably close, but it's still a 90-minute drive away. So, we mobilised a team of experienced adjusters and surveying experts from our building consultancy division to manage the high number of customer claims.

IN BRIEF

Worst wildfire

in New Zealand history

Damage

Devastated almost half of properties in remote village, 50 properties destroyed, 90 people evacuated

Drones

provided swift and safe assessment of the area

Collaboration

Closely collaborated with origin and cause investigators that provided insurers with early feedback

Two days before

Adjusters and surveyors on-site two days before access opened. sympathetically assisted traumatised customers with their claim

Proactive

Insurers were proactive and quick to settle claims

Demolition

and debris removal advanced quickly

20% Underinsured

Majority of properties

Within one month

most claims were settled

Prevention

Robust ongoing focus on fire prevention in NZ

They were on-site for two days before open access to the site was allowed.

We established a fast and effective plan for the response, including thorough recording of information at each loss site and solid quantification checks. Within the first week, we had set up specific claims processing systems with insurers.

We created a full record for each property, including the details of the original building, the extent of the damage, an estimated reinstatement cost with details of how it was quantified, and the demolition work and costs involved (including an audit of the same). We involved insurers and all parties in this process, which worked well.

THE CLEAN-UP

Due to the extent of damage, demolition and debris removal had to be advanced as quickly as possible. This prevented contamination to the remaining environment and enabled residents whose properties were unaffected to return home.

As a result, teams of professionals from a multitude of other sectors - demolition crews, cleanup workers, asbestos removal specialists, builders, plumbers and electricians - were sourced to carry out these works efficiently and swiftly. Additionally, temporary accommodation had to be arranged for customers whose homes were now uninhabitable.

TRAUMATISED CUSTOMERS

It's important to highlight the huge emotional aspect of dealing with this type of claim. People naturally have a deep attachment to their homes and, in this situation, might have lost personal and irreplaceable possessions like photographs, keepsakes, treasured gifts and heirlooms. In the event of a total loss, everything they have accumulated over the years disappears, and understandably, this is deeply distressing.

Although the Ohau area is a tourist and holiday home location, it's also a permanent residence for many senior citizens and retired members of the community. The damage caused by the fire was devastating and traumatic. Our adjusters spent many hours talking to customers, helping them record contents items and explaining the claim process to them. We were also able to quickly provide advice regarding their insurer's position on the claim and an early timeframe for settlement. Our support helped alleviate some of the anxiety that comes with such a loss.

UNDERINSURANCE

In the last eight or nine years, the basis of insurance in New Zealand has changed from having a sizebased total replacement policy for most domestic buildings to sum-insured cover. This means policyholders need to be mindful of factors such as accuracy of building costs, demolition expenses, yearly inflation and the impact of remote location settings.

Many people don't consider changes in construction prices. For example, a house in an urban location that might have cost NZ\$2,000 per square meter to build three or four years ago could cost NZ\$3,500 per square meter today, given the country's economic growth and substantial inflation in the building industry. From our review, we would suggest that the majority of the properties were 20% underinsured, although one was almost 100% under the value we considered representative of suitable replacement value.

ROLE PLAYED BY INSURERS

Insurers were commendably proactive and swift in settling claims following the Lake Ohau fire. They provided clear directives and worked with us to establish agreed processes, which enabled us to quantify claims quickly - bearing in mind the potential for litigation. Within one month, most claims were settled, albeit for the values associated with the demolition being confirmed.

FOCUS ON PREVENTION

New Zealand has always been dynamic in terms of fire response, with a well-established rural and bush fire service and high-quality rural fire systems. This includes comprehensive notification procedures as to when you can or can't use fire or heat sources. Firebreak systems are another example of prevention tools and are common throughout the country, particularly in residential areas.

For example, in Wellington, the surrounding hills are carved with firebreaks to prevent or minimise fire spread.

Fires will continue to be a formidable risk, and property owners should assess their potential exposures and take necessary precautionary and preventative measures. Insurers remain watchful of the impact bushfires may have on New Zealand in the future, particularly in terms of residential property losses and subsequent claims.





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UNITED KINGDOM | All that glitters

Mayfair diamond theft

When a dazzling US\$400,000 diamond ring went missing in a top London hotel, insurers appointed fine art experts from Sedgwick's major and complex loss team to investigate. With various twists and turns involving The Metropolitan Police, the Assistant District Attorney and the New York Supreme Court, the 10-carat stone was eventually returned to its rightful owner.



June 2019 – a New York jewellery designer, staying in a luxury hotel in Mayfair, London, went out with colleagues for the evening. At the time, she was wearing an expensive 10-carat single stone diamond ring valued at US\$400,000.

At the end of the evening, as the jewellery designer was returning to the hotel in a taxi, she took the ring off – the stone was quite large and prominent – and placed it in her handbag. Subsequently, while sitting in the hotel lobby having a nightcap with her colleague, the bag, which was now open, fell onto its side on the insured's lap. Without her noticing, the ring tumbled out onto the hotel carpet.

CCTV FOOTAGE

The following day, after the jewellery designer realised the ring was missing, she immediately called the hotel reception to see if it had been found, but to no avail.

However, later that morning, checks were made on the hotel CCTV recordings, and a cleaner could be seen picking something up from the floor shortly after the insured had left her table in the lobby. The footage showed that the cleaner had then handed this object over to a senior member of the hotel security team, who was on duty that night. He hadn't reported the item handed in by the cleaner, and at that point, the hotel contacted the Police. The Police subsequently arrested the security team employee.

JEWELLERS BLOCK POLICY

The ring was a stock item, and so it was claimed under the company's Jewellers Block policy as an accidental loss or theft. We were appointed within 24 hours of the incident and swiftly arranged a meeting with the insured and the hotel manager.

After viewing the CCTV coverage, we were satisfied that the loss had occurred as described, and after further checks on the origin of the ring, cover was confirmed in principle. However, at the same time, both we and the insured gave notice to the hotel that they would be held vicariously liable for the actions of their security staff in dishonestly retaining the ring.

THE METROPOLITAN POLICE

While the insured may have been a little careless in not properly securing her handbag on the night she lost the ring, she had arrived safely back in the hotel, and her actions could hardly be described as reckless or grossly negligent. As such, the fact that she dropped the ring from her handbag would be accidental loss and would fall within the scope of policy cover.

We liaised closely with the Metropolitan Police in London.

They advised that when interviewed, the security guard apparently produced another ring, which he claimed was the one that had been found and handed in. But when shown to the hotel cleaner and the insured, they both confirmed it wasn't the same ring.

DIAMOND 'FINGERPRINT'

Meanwhile, we immediately notified the diamond certification body – the Gemological Institute of America (GIA) in New York – of the missing stone. We sent them a copy of the original certification, which we had obtained from the insured.

If a diamond is certified, the lab (in this case, the GIA) test and assess the quality of a diamond and accurately record its dimensions and properties, then issue a written certificate, which is in effect a diamond's fingerprint. Each certificate has a unique number that's kept on file at the gem lab, and a copy is sent back with the diamond.

IN BRIEF

US\$400,000

diamond ring stolen in top London hotel

CCTV footage

identified security guard as the culprit

Arrested

The Metropolitan Police arrested the security guard

Liability

Hotel held vicariously liable for employee's actions

GIA New York

advised of missing stone. It was previously presented to GIA for certification

$Independent\ experts$

confirmed insured's title

Assistant District Attorney

and New York Supreme

Court involved

Given back

Diamond returned to rightful owner

Claim closed

with nil payment. All parties happy with the outcome except security guard charged with theft

Many certified diamonds include a microscopic laser inscription of their certification number on the outer edge of the diamond, called the 'girdle.' This is helpful if a certificate is ever lost or stolen.

MATCHING DIAMOND

Diamonds are much easier to trade if they have certificates and it's extremely difficult to sell a large stone without one. Therefore, it's not uncommon for thieves to send a stolen diamond to a lab for certification and so legitimise the stone.

After notifying the GIA, we received an urgent call back asking for further proof of ownership. They had received a matching 10-carat diamond for certification and needed to confirm title. They agreed to hold the diamond while title was established.

NEW YORK SUPREME COURT

The stone's ownership was then contested by the person or organisation that had sent it to the GIA. Initially, the GIA said they would need a US court to make an award of title.

To do this, the court would require officers from The Metropolitan Police to attend, but at the time, COVID-19 travel restrictions effectively ruled this out. However, the Police were very helpful in liaising with US authorities to progress matters.

One of the suspects charged in London requested an independent examination of the diamond, which was then carried out in New York. There was no longer any need to retain the stone as evidence in the criminal case, so the Assistant District Attorney applied for an order to the New York Supreme Court to release the stolen diamond to the rightful owner. This order was granted, and the stone was returned to the insured, although without its original gold mount.

HOTEL CLAIM

We initially placed the hotel on notice of a claim, and while they did not admit liability, their insurers appointed lawyers to represent them. We suspect that a 'without prejudice' offer would have been made, but as the diamond had been returned, we didn't need to pursue this.

We acted swiftly and went to great lengths to prove that the insured had title to the stolen diamond and expedited its return to the rightful owner. The hotel security guard was formally charged with theft, and we closed the file with a nil payment. The diamond was valued at US\$400,000 – needless to say, insurers, underwriters, brokers and the insured were all happy with the outcome.



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NETHERLANDS | Ever Given

A disaster waiting to happen?

Ever Given, one of the longest container ships in the world, docked in the Port of Rotterdam four months behind schedule. Following a well-publicised grounding incident in the Suez Canal, which blocked the waterway and caused global trade disruption, the ship was impounded until a substantial compensation claim was settled. The ship finally arrived at its destination 100 days later — but who will pick up the bill?

23 March 2021 – When the Ever Given ran aground in the Suez Canal, with its bow wedged in one bank and stern almost touching the other side, it completely blocked shipping access in both directions.

It was initially reported that high winds caused the incident. The vessel is more than 400 metres long and fully loaded, sits 60 metres above sea level — when strong winds catch a ship of this size, it's extremely difficult to maintain its course. However, it was subsequently suggested that technical or human error might also have been involved. Over the days that followed, a flotilla of tugboats, dredging vessels and an excavator worked relentlessly to free the ship.

29 March – Eventually, aided by the high spring tide, the vessel was refloated.

13 April – The Suez Canal Authority (SCA) announced that the Ever Given, all 26 Indian crew members and millions of pounds in cargo, had been seized on court orders until the owners paid US\$900 million in damages.

7 July – The Egyptian authorities released the ship after reaching an unspecified agreement on the compensation payment.

12 July – The Ever Given was inspected in Port Said before finally departing for Rotterdam. The vessel proceeded at a reduced speed, for reasons unknown (perhaps due to congestion at Rotterdam terminal).

Altogether, this incident in the Suez Canal caused an overall journey delay of more than 100 days.

SUEZ CANAL WIDENED

The Suez Canal is an artificial waterway that connects the Mediterranean Sea to the Red Sea.

It is state-owned by the SCA of Egypt and provides a direct shipping route between the North Atlantic and Indian Oceans, reducing the journey from the Arabian Sea to Europe by some 8,900 kilometres. In 2015, the 120-mile canal was expanded and widened, almost doubling its capacity, from 49 to 97 ships a day. But even at 205 metres wide, it wasn't enough for the Ever Given, at 400 metres long and 20,124 TEU (twenty-foot equivalent units).

GLOBAL SUPPLY DELAYS

When the Panama-flagged ship ran aground, there were 15 vessels behind it. It blocked one of the world's busiest trade routes for six days; ultimately 429 vessels were backed up waiting to pass through the Suez Canal.

This came as container shipping companies had been struggling for months due to COVID-19 disruptions, and a surge in demand for retail goods had culminated in logistical bottlenecks around the world.

The congestion forced some shipping companies to reroute around the Cape of Good Hope, causing more delays and disruption to the supply chain and potentially damaging perishable cargos.

There was a domino effect globally: manufacturers waiting for parts, retailers with empty shelves, and lost opportunities for ships queueing at the canal, vessels that were expected to be used for other cargo loads.

BIGGER SHIPS, BIGGER ISSUES

Launched in 2018, the Ever Given was the first container ship to carry more than 20,000 TEU (today, many newer ships are around 24,000 TEU). The Economic Times reports that a Chinese shipbuilder has registered designs for a 25,000 TEU vessel while predicting that '30,000 TEU monsters will be ploughing the oceans before the decade is out.'

When the SCA impounded the Ever Given, many clients pleaded with the ship's owners to unload their containers onto another vessel.

But even if the Egyptian authorities had allowed this, physically transferring the containers wasn't an option as the infrastructure at the impounded ship's location couldn't manage such a huge vessel. So, everyone had to wait.

IN BRIEF

Suez Canal

The Ever Given ran aground in the Suez Canal

Blocked

The ship blocked the waterway access for 429 vessels

Impounded

Once re-floated, it was impounded by SCA

US\$900 million

compensation payment demanded

100 days

before the ship was released

18,000

cargo containers valued at US\$1 billion

29 July 2021

ship arrived in Rotterdam

No physical damage

to containers or cargo but substantial losses accumulated due to delays

Bigger ships,

bigger issues?

CARGO INTERESTS

The Ever Given was loaded to 85% capacity – the estimated total cargo value was US\$1 billion, with perishable goods representing around US\$300 million. The stakeholders were global, but mainly Asian and European companies, brokers, insurers, lawyers, traders and uninsured customers.

According to a June 11 report in the Guardian, amongst its 18,000 container cargos were lemons, bamboo shoots, tofu, alongside goods from Lenovo, Ikea, Dixons Carphone, as well as items including barbecues, sun loungers, swimwear, lawnmowers and camping equipment – all fated to arrive at their intended destinations long after the summer ended.

GENERAL AVERAGE

The Ever Given declared general average (GA), which required all parties involved in the voyage to proportionally share the losses resulting from a major loss or sacrifice of cargo. This included the cargo owners, which means that cargo interest or their insurers would have to pay an estimated 25% of the value of the goods as a contribution to costs, and the containers would only be released once formalities were completed.

For some cargo owners, the value of their goods was relatively low and therefore uninsured. For others, the stock they were expecting would be completely out of season, making it more cost-efficient to just abandon the shipment. And when the owners' 25% contribution to GA isn't paid, and the container isn't collected, it's then the ship's problem to dispose of the cargo.

Cargo interest might also decide, after fulfilling all formalities, that it would be more cost efficient to sell their goods at the quayside to salvage buyers.

INSURANCE PERSPECTIVE

While the P&I Club has confirmed it is the protection and indemnity (third party) liabilities insurer of the Ever Given, the vessel and cargo are insured separately. For cargo interests, all the containers were intact, they were well stacked onboard, and there was no visible damage, so underwriters couldn't see any problem.

When containers are physically damaged, the cargo is usually insured, but in this instance, the cargo hadn't suffered losses other than the perishable cargos with a limited shelf life.

POTENTIAL CLAIMS

For cargo surveyors, managing the inspection of containers, together with the potential abandonment of shipments and subsequent salvage sale, was complex and challenging. While perishable fresh foodstuffs and/or medicines are usually insured, after four months there would be some expected deterioration in the quality of these items, or they may have passed their shelf life. The same would undoubtedly apply to refrigerated cargos, such as meat and fish products, for example.



In some markets, there could be a broad range of claims for the disruption that delays have caused to the wider supply chain, but this is unlikely to be covered. Business interruption is another aspect that potential claimants might have explored; many manufacturers only order goods when stock levels are getting low, and a four-month delay in new supplies could cause certain aspects of their business to grind to a halt.

Some products are also distinctly seasonal, which, in this case, would mean the importer had missed this year's summer market.

These are all potential losses resulting from the grounding of the Ever Given, and subsequent claims against insurers may or may not be covered.

WHO DECIDES?

According to updates issued by specialist global trade and commerce lawyers, Clyde & Co:

66

Whether the owners of the Ever Given owe a non-contractual duty of care to third parties, whose goods were carried aboard other vessels, and whose contracts have been affected by the grounding, is likely to be determined in accordance with Egyptian law. So, an affected party will need to obtain legal advice from locally qualified lawyers. The owners could also be sued in Japan, where they are based, or possibly in alternative jurisdictions depending on individual circumstances.



Until a full investigation has been carried out as to the cause of the grounding, it's unclear whether cargo interests with cargo onboard the Ever Given will have a right to claim in respect of any loss or damage to cargo that may have occurred and/or a defence to a claim for general average. *Owners will in any event seek* to rely upon The Hague, Hague-Visby or equivalent Rules to defend such claims. The owners of the Ever Given have now filed a limitation action before the English Admiralty Court to *limit their exposure to claims* for loss or damage to property.

AND THE FUTURE?

The Ever Given is on its way back to China, leaving a host of unresolved issues in its wake. The backlog caused by the biggest traffic jam in maritime history has contributed to soaring shipping rates, with the cost of containers escalating from £2,500 last year to £15,000 now. But this headline-grabbing incident is just one of many factors influencing the global shipping market.

Two years ago, the shipping industry was losing money, but COVID-19 has driven a greater focus on cargo interests, with cheaper consumer goods in high demand from Asia. Exports from China increased by 32% in June 2021, compared to the previous year. An imbalance in trade between Asia and the rest of the world has led to a shortage of shipping containers, as they're either stuck or delayed and not returning to their port of origin.

With high demand and a shortage of containers – freight rates have gone sky high. In some markets, cargo is now being shipped conventionally, for example, crates of plywood in bulk carriers from the far East to Europe. We are already involved in resolving claims for damages to these cargos.

The new class of ultra-large container ships purport to offer economies of scale while reducing the impact on the environment. But is building bigger ships the solution?

AUTHOR'S VIEWPOINT

Ton Schox, Sedgwick's head of marine for Continental Europe, firmly believes that bigger ships create bigger problems:



We're still on a learning curve with these huge container ships
– as the Ever Given incident in the Suez Canal demonstrates.
Some shipping companies are employing cheaper crews – people who don't have the skills to handle these big vessels, particularly when faced with increasingly unpredictable and extreme weather conditions at sea.

There are also fewer ports around the world with the infrastructure that can support 400-metre, 20,000+ TEU vessels.

Deeper, wider berths are required, together with larger cranes for unloading and the logistics to manage and efficiently distribute the freight to its final destination.



The largest terminal company in Hamburg reports that a 400-metre vessel needs 3,800 trucks and 50 trains, 48 hours before and after the ship arrives.

It begs the question – should there be a move back to smaller ships that are easier to manage?

Perhaps we, as consumers, should also be trying to do things differently. Do we really need to buy cheap goods from Asia when we could support local, more sustainable production? If COVID-19 has taught us anything, it's that self-sufficiency is far more dependable and reassuring than low-cost imports. We also have a responsibility to consider what's best for the environment.

DIGITAL DEVELOPMENTS

With the current growth in shipping and the introduction of larger vessels with greater container capacity, it follows that we will inevitably see cargo claims increasing in the future. And, following any shipping incident, lessons learnt from COVID-19 travel restrictions show that it's significantly less expensive and more efficient to rely on locally based marine resources.

Remote surveying has also become increasingly popular during the pandemic.

Sedgwick has been using drones and mobile phones to provide video surveys, enabling work to progress on large losses in more isolated or difficult to reach areas.

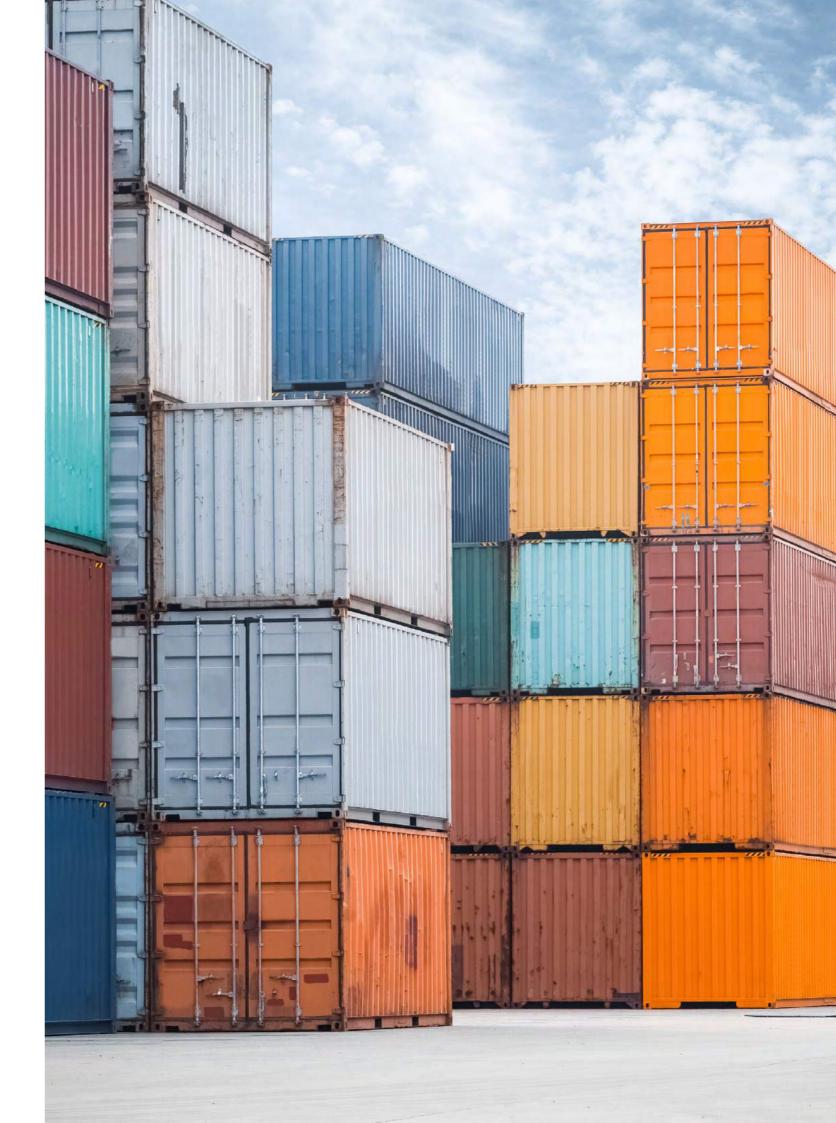
For example, in a recent claim where the entire racking system had collapsed in a cold storage unit, we deployed specialist drones that can operate at temperatures below 20 Celsius; we were able to devise a safe salvage plan from the captured recordings.

Underwriters and corporates no longer need to send people all over the world when video communications can deliver an immediate and detailed overview of the loss to every stakeholder's computer screen. Combining advanced technology with the expertise and experience of marine specialists produces better outcomes for when the inevitable losses occur.



TON SCHOX

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Industry knowledge is power

During the installation of a substantial wind farm project in the North Sea, a catastrophic fault occurred while securing the base of a substation platform. While the subsequent £6 million construction all risks (CAR) claim focused on the failure of grouting seals, our specialist engineer established that the issue actually originated in the installation process.

An offshore wind farm, comprising an offshore substation platform (OSP), 56 wind turbines, two export cables, various inter-array cables and an onshore substation, was commissioned in the North Sea, just off the Suffolk coastline.

While installing the jacket (the below-sea, four-legged base that supports the above-sea structure), there was an apparent failure of the primary and secondary grout seals on one of the legs. This became apparent when the grout pumping activities were carried out.

The wind farm notified insurers of a claim under their Construction All Risks insurance policy, and Sedgwick's major and complex loss team was assigned to investigate. An expert from our renewable energy specialist practice group contacted the insured and their engineering, procurement, construction and installation (EPCI) contractor to carry out further enquiries.

OSP BACKGROUND

The offshore substation platform houses transformers, switchgear, protection and control equipment, and other facilities. Its purpose is to collect and export the power generated by the turbines to an onshore substation through specialised submarine cables.

The EPCI sub-contractor had been appointed to undertake various works, including the design and engineering, procurement, construction and installation of the offshore substation platform's topsides and jacket.

The jackets are the lattice steel structures installed under the sea; the wind turbines or substations (also known as 'topsides') are then positioned on top. To secure the jacket structure to the seabed, four pile sleeves 12 metres long are positioned, which then facilitate the installation of pile sections.

Grout seals are activated when the pile section is inserted, and they have to be lowered into the sleeves very precisely so the seals aren't damaged during this process. Centralisers are also fitted to help guide the pile accurately through the sleeve.

GROUTING LEAK

After installing the piling for this particular OSP jacket, there were difficulties during the grouting of one of the B1 leg. The grouting process effectively 'glues' the piles into place within the sleeve. Using a deep sea remote operational vehicle (ROV) fitted with video cameras, grout could be seen leaking out of the base of the B1 leg pile sleeve immediately after being pumped in, and so it was assumed that one or both of the B1 leg grout seals had failed.



IN BRIEF

Wind farm project

OSP installation

Failure

Catastrophic failure of grout seals

Remedial works

resolved the issue

£6m CAR claim

for fix and downtime

Specialist

renewable energy engineer investigated loss

Meticulously

reviewed technical documents, establishing no failure of seals or pile/sleeves

Seabed

was on a slope

Inadequate tolerance

or installation of piles into sleeves, resulting in damage to grout seals

Cost queried

Excessive claim costs queried, saving insurers £1m

The installation process was stopped while the project management team investigated options for remedial works. While this was carried out, a heavy lifting crane vessel, a transportation barge, and towing and anchor handling tugs were put on standby, at a cost of up to £250,000 a day.

REMEDIAL WORKS

The sub-contractors had devised a plan. They dumped aggregate material on the outside of the B1 pile sleeve and poured sand inside the sleeve annulus, then introduced more grouting. Following a curing period, an ROV visual survey and compression tests demonstrated that the grout column had achieved adequate strength and there was no further leakage. The solution had worked. The crane, barge and tugs remained on standby for the entire period.

The attending Marine Warranty Surveyor issued a Certificate of Approval for the topside substation installation.

The insureds' claim against their Construction All Risk policy incorporated expenses incurred in investigating and determining the required remedial works to leg B1, together with on-site downtime, including the holding costs of the crane, barge and tugs. Initially, this amounted to a hefty £6 million.

DETAILED TECHNICAL INVESTIGATION

Sedgwick's renewable energy experts carried out a detailed review of the design and installation of the jacket and grout piles. We also examined the video footage taken via the ROV at various stages in the process.

We requested all the contracts and technical installation documents for review and went through the reams of information in meticulous detail. From the reports provided, it was evident that the primary and secondary seals were produced to specification and were not defective. Both individual subsections of the pile and sleeve were also manufactured without deficiencies, and it was highly unlikely that the leg seals had been damaged during transit, as they were held safely within the pile sleeves.

We also concluded that, considering the seals are positioned at the bottom of a 12-metre pile sleeve, any deviation from vertical with the pile would be minimal at the locations of the primary and secondary seals, especially with centralisers positioned directly above.

The installation design was potentially at fault if, in practice, the tolerances proved to be unrealistic and unachievable.

SLOPING SEABED

A bathymetric survey had identified that the seabed sloped towards true north. Accordingly, the subcontractors had increased the maximum allowable jacket tolerance from 0.5° to 1.0°, which was approved by the insured.

Based on our in-depth investigations, it would seem that the slope and nature of the seabed, specifically around the area of leg B1, had not been adequately considered when calculating the tolerances between the pile sleeve and the pile. Therefore, as the sleeve of leg B1 had been sitting at a greater angle than specified, the tolerances were inadequate. The grouting seals were then accidentally damaged while driving the pile into the sleeve.

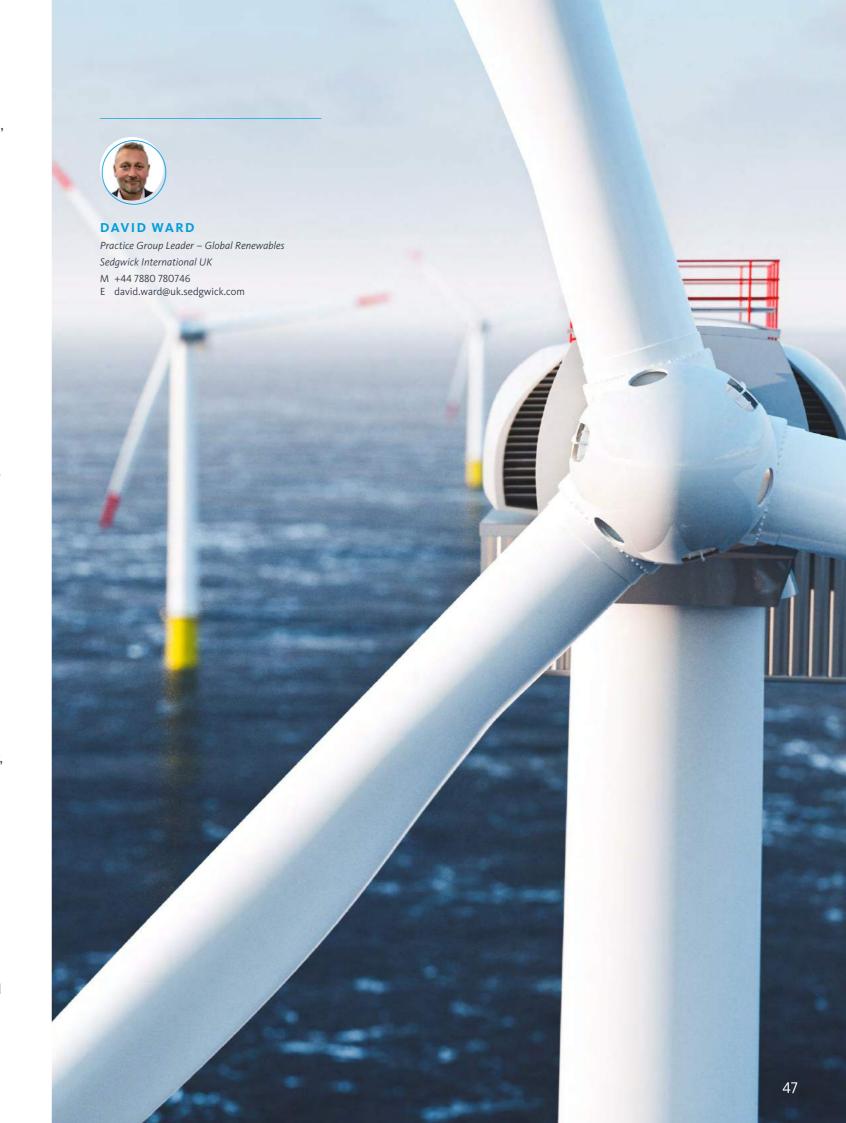
LESSONS LEARNED

We provided a detailed analysis of the installation process design flaw and advised insurers accordingly. We also recommended that the insured review their installation design procedures for future projects as, in our view, there were discrepancies.

Insurers decided that the policy should respond to this loss because, while there was defective design, damage had resulted as a direct consequence.

We contested a significant proportion of the costs detailed within the claim, as they didn't fall within the scope of cover. Ultimately, this saved insurers nearly £1 million. More importantly, our expert renewable energy team applied specific engineering skills and industry knowledge to a significant and complex major loss, and uncovered a previously undetected installation process design issue.

Our detailed investigations and professional input will help mitigate against future losses of this type and scale in the power industry.



CANADA | Wastewater treatment

Small doesn't equal simple

In a rural part of Canada, a small mall suffered two wastewater treatment plant breakdowns in just six months. The cost of the subsequent claims for failure of mechanical components was surpassed by the significant additional expenses incurred while resolving the issues. And underwriters beware – breakdowns on this specific type of system might be more frequent than initially expected.



HIGH FOOTFALL

With a selection of around fifteen shops, restaurants and offices, all occupied by tenants, this mall is relatively small and remote. But situated right by a major highway, the footfall is significant, with customers visiting the gas station, fast food restaurant and coffee shop, all operating long hours, seven days a week. Many visitors make good use of the washroom facilities, and this is where much of the waste is generated.

The failure of the central RBC meant that the system would have to be regularly pumped out as the municipality wouldn't allow sewage to be dumped into the public network without treatment. Foul water could also start backing up into the various outlets in the mall.

THE ROTATING BIOLOGICAL CONTACTOR

The RBC is a biological fixed-film treatment system. It's used following primary treatment, which removes grit, sand and coarse suspended material through a screening process.

The RBC then cleans the residual water to an acceptable standard for disposal into public sewers.

The system consists of a series of disks, made from plastic mesh (the media), bolted to circular metal frames, which are then attached to a central shaft. The shaft rests horizontally on several bearings and is partially submerged in a large basin, which collects the residual water from the mall.

The shaft is rotated by an electric motor through a simple chain-sprocket mechanism, circulating the water through the media so that bacteria and other microorganisms can 'eat' the organics in the water.

MAINTENANCE CONTRACT

RBC systems are very simple in design and operation. There are quite a few standard models, but they are not always available as 'off the shelf' products, and, more often than not, they must be ordered well in advance.

The other issue is that existing designs tend to change, so when something breaks after six years in operation, it's highly possible that a specific system may have been discontinued – as was the case on this claim.

RBC systems are particularly effective in a small to medium community or industrial situation and should require little attention other than to check that the media continues to rotate. The mall has a long-running contract for the monitoring and maintenance of the RBC with a local firm. And there's a CCTV system in place, with constant feeds to both the insured and the maintenance contractor's offices.

FIRST BREAKDOWN

When the RBC failed on the first occasion, the original manufacturer was called in to inspect the system. They found that two flanges on the RBC's shaft, supporting two media packs, had fractured.

So, new flanges had to be welded to the shaft and the media packs replaced. This incident was defined as accidental mechanical failure and was covered under the insured's Equipment Breakdown Policy – the recommended property damages reserve was C\$8,000, less the policy deductible.

However, substantial additional costs were incurred during the downtime. The mall has an exemption on sewage charges from the municipality as their residual waters from the RBC system – when it's in operation – are treated. Following the RBC failure, they had to hire a contractor to pump the wastewater into trucks, and then dispose of the effluent.

IN BRIEF

Small rural mall,

with high footfall

Failure

Suffered two wastewater system mechanical failures

Long lead time

on specialist repairs

Transport

Temporarily wastewater had to be tankered away

Expensive

Additional expenses quadrupled the claim

RBC systems

This failure is common in some RBC systems

Build up

Uneven build-up of sediment leads to imbalanced rotation, explaining the RBC failure

Future risk covered

Insurers alerted to potential and frequency for this failure, enabling accurate assessment on future RBC risks

This also put additional pressure on the maintenance company, as the basin levels had to be constantly monitored.

The septic cleaning service cost C\$595 per trip, and on days when the mall had been particularly busy, it was emptied twice a day. Costs totalled almost C\$25,000, across the period when the RBC was initially out of commission.

SECOND BREAKDOWN

Just over six months later, the RBC experienced another breakdown – this time, the main shaft had seized. We inspected the damaged shaft, after it had been removed from the basin, and there was clear evidence of metal fatigue and corrosion. This had caused it to fracture, and the RBC would now have to be completely replaced. The manufacturer stated that it would take at least three months as new parts needed to be fabricated, and there was a significant lead time in the production schedule.

SMALL BECOMES BIG

To complicate matters, the RBC manufacturer had been acquired by another firm, and the original system design was being phased out. It was a change, rather than an 'upgrade,' but nevertheless, it required the complete replacement of the media packs – two of which were only a few months old. Given the condition of the previously replaced media packs, arguably, the two older discs needed replacing anyway.

Again, this was accidental mechanical failure and was covered under the terms of the insurance policy.

The recommended reserve to replace the equipment on this occasion was just over C\$116,000. And the additional costs of septic cleaning of the basin on a daily basis, while the RBC was out of commission, came in at just over C\$139,000.

So, the combined costs to rectify two relatively small and straightforward engineering failure issues were completely eclipsed by the expenses incurred on the wastewater pumping services which were needed to provide a temporary solution to the problem.

UNDERWRITING NOTES

Some brief research into this topic revealed that cracking, fatigue and shaft collapse was a common cause of failure in RBC installations in the late 1990s.

Through further investigations, it became evident that this type of RBC breakdown might be more frequent than anticipated, given the working principle of the mechanism. Over time in operation, the bacteria grows within the media packs, and the sediment, grease and solids from the wastewater builds-up, making the discs heavier and heavier. This build-up isn't uniform and will very likely get to a point where the cyclical momentum creates imbalanced rotation, which puts the RBC shaft under additional stress.

Given the high footfall through this small but busy mall and the volume of wastewater being processed through the system, this would explain the cause of the twoRBC shaft failures.

EYES AND EARS

While both losses were covered under the terms of the policy, as the 'eyes and ears of insurers,' it's within our remit to alert clients to the aggravation of any type of risk. We subsequently provided insurers with loss scenarios, outlining how these systems 'behave' and how they can break, as well as the most frequent cause. Insurers can then reassess their position and introduce cut-off dates for when designs change and guidelines to accurately assess the soundness of the RBC when considering the risk.

This claim demonstrates how it doesn't pay to assume that just because the value of the equipment is low, or the location doesn't seem particularly high profile, it won't have the potential to create significant losses. And it's our job to make sure we highlight any risk characteristics that suggest losses might become more frequent and severe than expected at the outset.



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Generating fast and fair outcomes

A major processor of phosphate rock and phosphoric acid, used in the production of fertilisers, was impacted by a serious fire. Quick actions got the business back up and running within 24 hours of the incident. Industry-specific knowledge and power expertise generated fast and fair outcomes for all stakeholders on this US\$17 million loss.

Africa - In the early morning hours, operatives working in the power plant at a large acid and fertiliser manufacturing business heard a sudden, loud noise. They noticed smoke coming from the exhaust side of the high pressure (HP) steam turbine cylinder of one of the power plant turbines. It was later discovered that a rotor or stator blade had been liberated, ultimately jamming the HP turbine rotor, resulting in the destruction of the bearing on the gearbox side. This allowed lubrication oil to escape onto the hot surface of the turbine, causing it to ignite.

With oil continuing to feed into the unit, the fire grew in intensity. It spread around the upper level of the building, impacting the turbine and auxiliary systems – including the bearing lubrication and hydraulic oil systems. The fire services quickly attended and, with the oil supply disconnected, they had the situation under control within an hour.

CORROSIVE SOOT DEPOSITS

The power plant building is on two storeys. On the top floor is a turbine hall and condenser, the control room and electrical relay room, as well as two offices. The ground floor comprises various auxiliary pumps, pipework and electrical cables.

The turbine hall and lower ground floor were severely impacted by direct fire damage and heat; all the connecting cables to various other pieces of equipment were burned through. The auxiliary systems had also been badly affected.

There was significant smoke and soot contamination to the walls, the condenser's external surfaces and most control panels. The control room, electrical relay room and offices containing other sensitive electronic monitoring instruments were also contaminated with highly corrosive soot deposits – this urgently needed addressing.

There was catastrophic mechanical damage to the gearbox, low pressure (LP) turbine and HP turbine.

Specialist engineers were needed to evaluate the extent of the required repairs or replacement of damaged mechanical components.

With plant production now at a standstill, Sedgwick had to act quickly. The insured needed immediate on-site support to initiate the short-term measures that would get the facility fully functional as soon as possible.

STEAM AND ELECTRICITY

Steam and electricity are needed in the phosphoric acid production process. The steam is produced from waste heat boilers that operate from the exhaust of the sulphur furnaces, which are used in the manufacturing process of sulphuric acid.



IN BRIEF

Power plant,

fire in Africa

Failure

Caused by catastrophic failure of steam turbine

Power supply

Temporary power supply installed 24 hours after the incident

Production

through all units immediately resumed

Contractors appointed

clean up and contamination contractors quickly appointed

Mitigation

Further soot corrosion damage to technical equipment mitigated

Specialists involved

Specialist engineering companies repaired or replaced mechanical components, control systems and technical monitoring instruments

Knowledge and expertise

Industry knowledge was critical to understanding insured's business needs, and technical power expertise vital to clarifying engineering issues

Fast and fair

settlement reached on US\$17 million loss

Electricity is provided by the dedicated on-site power plant, comprising a 27-megawatt fully condensing steam turbine. The plant requires around 10 megawatts of the power that's generated, and the remainder is either sold to surrounding businesses or the national electricity grid.

FAST CLEAN-UP

New cabling was installed within 24 hours of the incident, and another office was quickly transformed into a temporary control room. Power was then imported from the national electricity provider until the on-site power plant could be reinstated. Crucially, this enabled all production units at the plant to restart.

Cleaning and decontamination was immediately organised to minimise any ongoing soot deposit corrosion damage to the electronic equipment. This process started within two days of the fire and took some 30 days to complete.

TURBINE REPAIRS

Original manufacturers of the various mechanical component parts of the plant equipment came in to assess the temporary repairs required for the fastest return to operation, and the necessary longer-term permanent repairs. Extensive works were required, given the damage to all the turbine parts, gearbox and auxiliary equipment.

There was impact damage to the diaphragms of the LP turbine and the bearings.

The turbine alternator suffered soot contamination, and repairs were required to external parts of the generator, electrical junction boxes and the turbine gearbox.

PRE-EXISTING DEFECTS

The HP turbine repairs and speed governor were critical to returning the unit to service. However, once the HP turbine had been stripped down, some defects that pre-existed the fire became apparent. Notably, cracks in the steam chest and resultant deformation were most likely due to long-term creep rather than damage resulting from the turbine failure.

The engineers attempted temporary repairs, but subsequently recommended that the steam chest and the barrel casing should be completely replaced; this created delays in rebuilding the turbine. Supply issues with other mechanical components led to a constantly changing projected completion date.

CLAIM CONSIDERATIONS

Many of the temporary repairs could eventually be considered permanent. The LP turbine had also been due for a major overhaul, and this was carried out following the fire. Various other adjustments had to be made for works that were either routine maintenance or improvements. This complicated calculations and negotiations on the indemnifiable business interruption (BI) period and allowable increased costs of working.

We also had to consider the cost of importing energy and how much the insured would have earned from selling the excess power they usually generate to neighbouring companies or back to the national electricity supplier.

EXTENSIVE KNOWLEDGE

Key to the success of this US\$17 million claim from the insureds' perspective was in getting their business fully operational within 24 hours of the fire.

We were also quick to get stakeholders' agreement to appoint third-party consultants and decontamination experts so that the clean-up could begin before soot corrosion caused further damage. Much of the electronic equipment was saved through this swift action, which reduced permanent repair costs and downtime.

We also had to oversee the highly technical steam turbine rebuild with eight different specialist suppliers, as well as coordinate the testing and, in some cases, replacement of numerous other electrical instruments and equipment.

Our extensive experience and understanding of the acid processing and fertiliser business, together with the technical resources within our global power practice group, enabled us to rapidly determine cause and agree liability under the policy.

We were also able to confirm the nature and baseline costs of the damage at the earliest stage. This empowered us to agree prompt payments and assist with the continued operation of the insured's business.

THE BOTTOM LINE

When handling any major loss, it's vital to have a thorough and specific grasp of the business sector and the technical issues the insured is likely to face. We had the knowledge and expertise to progress this complex claim quickly, mitigating further damage while getting the business back up and running in the shortest possible time – and with the minimum of business disruption.



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QATAR | Aviation fuel spill

Cleaning up remotely

Extension works to a major international airport in the Middle East were interrupted when contractors damaged an underground steel aviation fuel pipe. The subsequent bill for cleaning up the spill was initially estimated to exceed the US\$10 million policy liability. But supported by environmental specialists from EFI Global (a Sedgwick subsidiary), the area was declared clean 12 months later – and the claim was settled for US\$ 1.5million.

25 March 2020 – The main contractors carrying out extension works to a large airport in the Middle East organised a subcontractor to perform a geotechnical survey of the area. While drilling a borehole with a 76 millimetre auger, they hit and fractured a 250 millimetre steel aviation fuel pipe. When the drilling operator suddenly smelt kerosene, he immediately stopped drilling and reported the problem.

The damaged underground pipe was used to transfer jet fuel from a nearby tank farm to aircraft refuelling positions on the airport apron. Before any emergency repairs could be carried out, some 155,000 litres of Jet A-1 aviation fuel (kerosene) had leaked into the surrounding substrata and underlying water table.

The airport made it clear that it held the main contractors liable for the damage caused as a result of the incident.

Insurers instructed Sedgwick's local major and complex loss team on the commercial general liability claim, related to damage to the pipe and the extensive ground and environmental contamination of the area.

EXPERT INVESTIGATIONS

5 April 2020 – One of our specialist adjusters visited the site to discuss the circumstances of the loss and the nature and extent of the damage. The fractured pipe had been quickly sleeved as a temporary repair to provide continuity of aircraft fuel supplies, while the ongoing

construction works remained uninterrupted.

Initial assessments suggested a 30-metre radius of contamination around the point where the leakage occurred, down to a depth of around 6 metres below the pipe. The water table at this location is semi-tidal, so there was also some concern that a significant amount of kerosene might have leached into the subterranean water.

The incident occurred when, for reasons unknown, the geotechnical surveying subcontractor decided to relocate the borehole without consultation or approval. They also failed to carry out scans or investigations to check whether there were any underground services near the new location.

GATHERING INFORMATION

During our visit, we requested copies of all drawings and any other documentation provided to the subcontractor, photographs taken at the time of the incident, engineering and inspection reports to identify the area and depth of contamination and volume of fuel spilt, the method statement for repair of the pipe, as well as removal, decontamination and disposal of the contaminated material. We also required cost estimates for all remediation works, together with any directives from government offices regarding their specific requirements.

METHOD STATEMENT

The contractors' method statement for the fuel spill entailed the following:

- Slit trenches had to be installed around the spill point to determine the extent of the issue. As
- aviation fuel can become volatile quickly in hot conditions, this may have reduced the amount of contamination.
- If the Jet A-1 aviation fuel had reached groundwater and spread widely, then excavating contaminated sand and rock material around the groundwater may only further distribute the fuel, resulting in extensive excavations and expensive waste disposal.

IN BRIEF

Damage

to underground aviation fuel pipe

Environmental pollution

Leakage of 155,000 litres of aviation fuel led to environmental pollution incident at national airport

Estimates

Initial estimates for clean-up exceeded US\$10m policy liability

EFI Global

Environmental specialists from EFI
Global engaged to advise on logistics
for removal of contamination and
full compliance with the Ministry of
Interior requirements

Remotely monitored

Remedial works monitored closely throughout – remotely

Claims costs

totalled US\$1.5 million, saving insurers US\$8.5 million

Mutual satisfaction

Claim resolved to mutual satisfaction of all stakeholders

- Removing the contaminated material and disposal to an approved site was the preferred option, although dealing with groundwater could be problematic, slowing the clean-up and creating a long-term and extremely costly operation.
- The most efficient and costeffective solution was to bring in-situ treatment equipment to the site. But this couldn't be sourced locally.

The main contractor was already preparing to dig slit trenches at 10-metre intervals on all four sides of the borehole, and sink further boreholes to establish the extent and depth of the contamination.

GREEN CREDENTIALS

This Middle Eastern country is committed to supporting the health and sustainability of the environment. They are founding members of a consortium that established the Global Green Growth Institute (GGGI) and contributed US\$10 million to enable direct work on sustainable energy, water and sanitation, sustainable landscapes, and green cities. They also participate in the 'One Planet' Global Sovereign Wealth Fund.

Other commitments to protecting the environment include planting one million trees in 2021 and commissioning a carbon storage plant, the largest in the region. The Ministry of the Interior took a concerned and active interest in the contractors' plans to rectify the environmental pollution issue at the country's national airport.

ENVIRONMENTAL SPECIALISTS

We quickly contacted specialists in our environmental consultancy, EFI Global, to advise the insured on actions and logistics. At the time, COVID-19 was escalating worldwide, and wherever practical, meetings and site inspections had to be carried out remotely.

Working closely with our environmental consultants, we reviewed all the technical reports and other documents from the point of view of scope, approach and cost of the contamination investigation and the remediation and reinstatement of the affected areas.

The remediation works were clearly urgent, and the airport required prompt repairs to the pipeline, given the potential impact on flight operations. However, specialist resources were limited locally, particularly during the pandemic, and some of the more cost-effective and efficient technical solutions were not easily or readily available.

MINISTRY APPROVAL

Method statements for the proposed remediation works were subject to statutory authority approval by the client (the government entity running the airport) and the local ministries. They were very clear that all contaminated sand, soil and other substrata material must be excavated and treated to remove all traces of jet fuel contamination, then disposed of at an approved site. They also required that all contaminated water had to be pumped clear and removed, treated for contamination and then disposed of safely.

Having agreed with the contractors' approach, the Ministry of Interior then authorised the excavation, dewatering, disposal and incineration of waste from the site. Specialist subcontractors were appointed to carry out the clean-up works, and once complete, fresh material was delivered to backfill the excavations. The entire project was overseen by our major and complex loss team and monitored remotely by environmental experts from EFI Global.

At the same time, the jet fuel pipe was in need of repair. The pipeline had to be emptied of fuel, purged with nitrogen, the damaged section removed and a new section spliced in. The pipe then had to be hydrotested and recommissioned to bring it back into service.

FINAL TESTING

After the remedial works had been completed, the main contractor produced a specialist report on the incident. Final testing confirmed that the fuel was forced upward under pressure and did not gravitate down to create a deeper-lying plume. This may have been due to the highly impermeable shallow geology, which was attributed to the small grain sand conditions in the area.

The excavations had removed the vast majority of the aviation fuel contamination, and the report confirmed an absence of ongoing environmental risk. Colleagues at Global Environmental Adjusting and EFI Global also examined the information and concluded that this was a positive result.

Initially, it was expected that the claim would exceed the US\$10 million limit of liability, but ultimately, the insured submitted a formal statement of claim at just under US\$1.5 million.

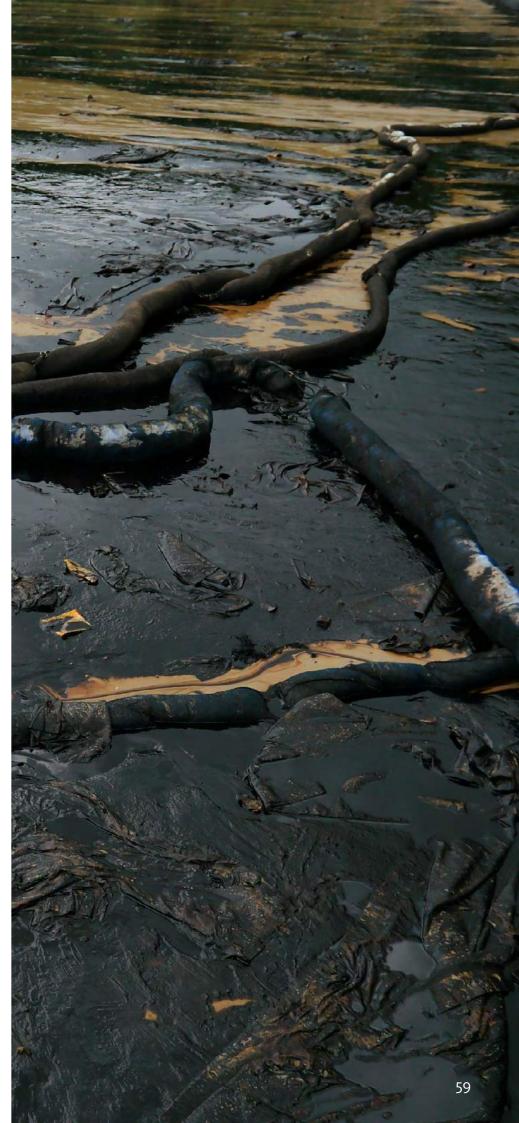
We first visited the loss in early April 2020 and carefully monitored progress throughout, in collaboration with in-house specialist environmental consultants – with most meetings carried out virtually – until the incident was resolved. The claim was finally closed to everyone's mutual satisfaction in May 2021.

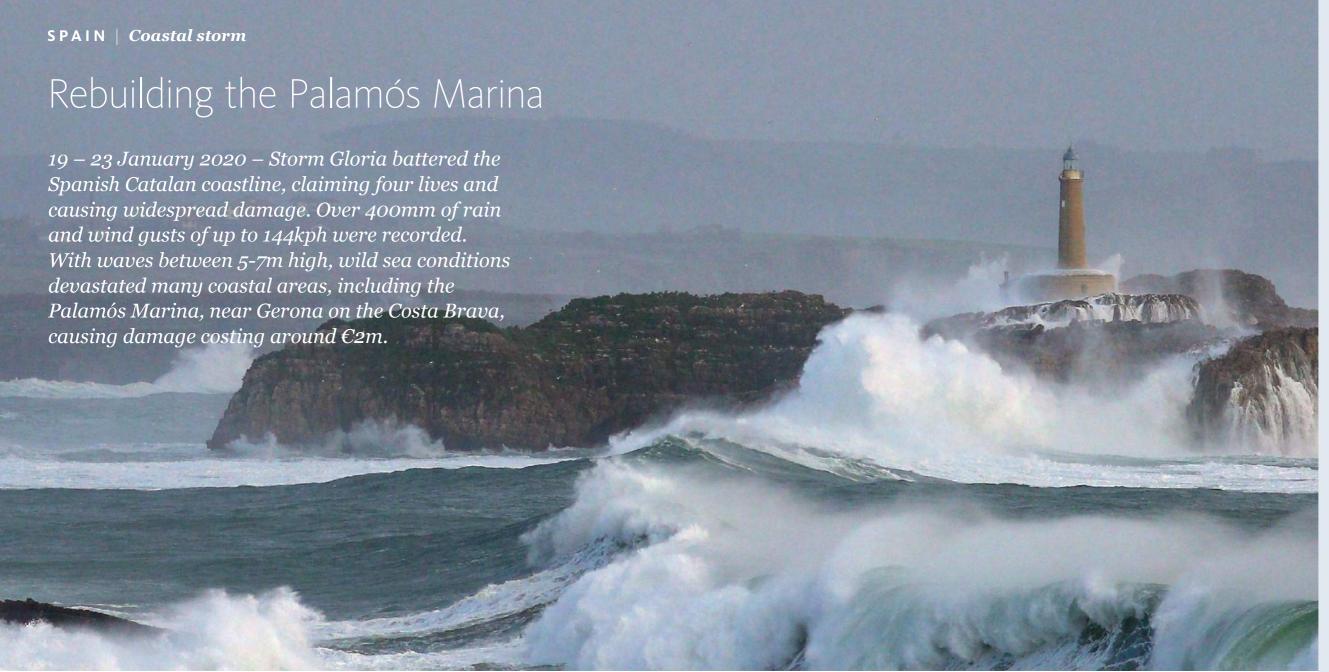


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The Palamós Marina was built in 1990. It's privately managed and provides 866 sailing vessel berths, as well as a service crane and 30-tonne hoist. It's a typical modern harbour with 24-hour surveillance, a refuelling station, Wi-Fi, bars, restaurants, a children's playground and a supermarket. There are also several buildings used by the sailing club, warehouses for storing vessels and properties leased for activities such as hospitality and scuba diving.

SEVERE STRUCTURAL DAMAGE

The Palamós Marina is exposed to weather coming in from the east, and in January of 2020 Storm Gloria headed in from precisely this direction, hitting the Catalan coastline with strong winds, rough seas and huge waves. This relentless sea storm pummelled the marina's seawall for two days, eventually breaking it down, causing the water level to rise in the dock. The waves also soared above the breakwater, flooding the interior quayside.

When the storm finally subsided, severe structural damage could be seen to the seawall concrete armour units and around 60 -metres of the breakwater and interior quay. There was also damage to the mooring jetties, boat service connections, the re-fuelling station and interior paving. Inside the marina, dry dock vessel supports, mooring ropes, and the weather station had also been impacted, as well as boats in the marina's care near the dry dock.

CATASTROPHE INSURANCE

In Spain, catastrophic natural events, such as the damage caused by Storm Gloria, are covered by the Consorcio de Compensación de Seguros (CCS). This is a public entity that represents the Spanish government and has very strict conditions and regulations. The CCS provides compensation for damages produced by extraordinary risks (e.g., natural phenomena and events of a political or social nature) on the condition that the claimant holds an adequate insurance policy that covers damage to goods, life and accidents.

CCS appointed Sedgwick to the loss, and Palamós Marina had their own specialist consultant loss adjuster. Working together, we collaborated to help get restoration works underway as quickly as possible and reach a final agreement between all parties.

THE CHALLENGES

The first significant challenge was reaching the marina, as many roads were either damaged or flooded. Then, a few weeks later, COVID-19 restrictions prevented our experts from travelling between the provinces.

IN BRIEF

Huge storm

batters Catalan coastline

Extensive damage

caused to Palamós Marina

Structure compromised

Areas of seawall structurally compromised. Damage to breakwater, interior quay and walkways, jetties, service connections, refuelling station and more. Third party vessels also damaged

CCS cover

Catastrophe events in Spain covered by CCS

Sedgwick appointed
by CCS to the loss

Many challenges, including access restrictions

Collaborated with all parties to get repairs underway

Claims settled

at €2 million to everyone's satisfaction. CCS extraordinary risk cover is unique to Spain and surcharge must be reflected in the premium

We also had to consider the damage to both the marina's property and any third-party property in their custody – ships moored and under repair, for example. Therefore, any agreements that were reached had to satisfy several stakeholders.

CIVIL ENGINEERING REPAIRS

The major repairs were to the marina itself, and to begin with, a new road had to be built parallel to the seawall to provide access for a 250-tonne lattice boom crane. Once the crane was secured, some 124 concrete armour units that had shifted in the storm were laid on the enrockment or seabed for subsequent repositioning. Unfortunately, it was impossible to recover them all and ultimately, 204 new concrete armour units had to be bought in.

Works to the quay involved breaking up the damaged paving, the capping beam and the concrete quay, then rebuilding it all in situ, working on 8-to 10-metre sections at a time. There was also considerable damage to paving in two other walkway areas, which had to be broken up and fresh concrete reformed.

CLEANING UP

The clean-up of sand and debris in the marina was extensive, and many items sunk in the dock had to be retrieved. The claim also included sundry items such as floats, steps, ramps, buoys, jetties, two changing rooms and office modules. Pipes distributing water and electricity services were also damaged, together with two 30,000-litre underground fuel tanks that were contaminated with sand and seawater.

We helped the Palamós Marina management team and their adjuster handle every aspect of the claim. We provided full support for items covered by the policy and CCS regulations and gave advance warning of anything that wasn't covered or where depreciation applied. This ensured that unnecessary expenses were avoided, and the insured was able to return to their business as usual as soon as possible.

LESSONS LEARNT

In total, the damage caused to Palamós Marina during the January 2020 storm cost just under €2 m to put right. However, the most important lesson learnt from this catastrophic loss was the crucial need for adequate insurance.

In order to be entitled to compensation for the acts of nature covered by the CCS scheme, seven days must have elapsed between the date of issue of the policy (or effective date, if later) and the occurrence of an extraordinary loss.

The insured or policyholder must also be up to date with premium payments, and it's essential that this includes the correctly calculated CCS surcharge. This type of extraordinary risk cover is specific to Spain.

When insurance is issued in other countries and is intended to cover local risks, the CCS surcharge is often not reflected in the premium payment; sometimes it's forgotten altogether. This can result in huge customer disappointment when losses are incurred in an extreme catastrophic Spanish event, which the CCS scheme would normally cover.

MORE STORMS

Early September 2021, the Catalan coast was once again battered by storms that devastated many areas in the region. Scientists have stated that torrential rain is becoming increasingly common on Spain's Mediterranean coast, due to global warming and climate change.

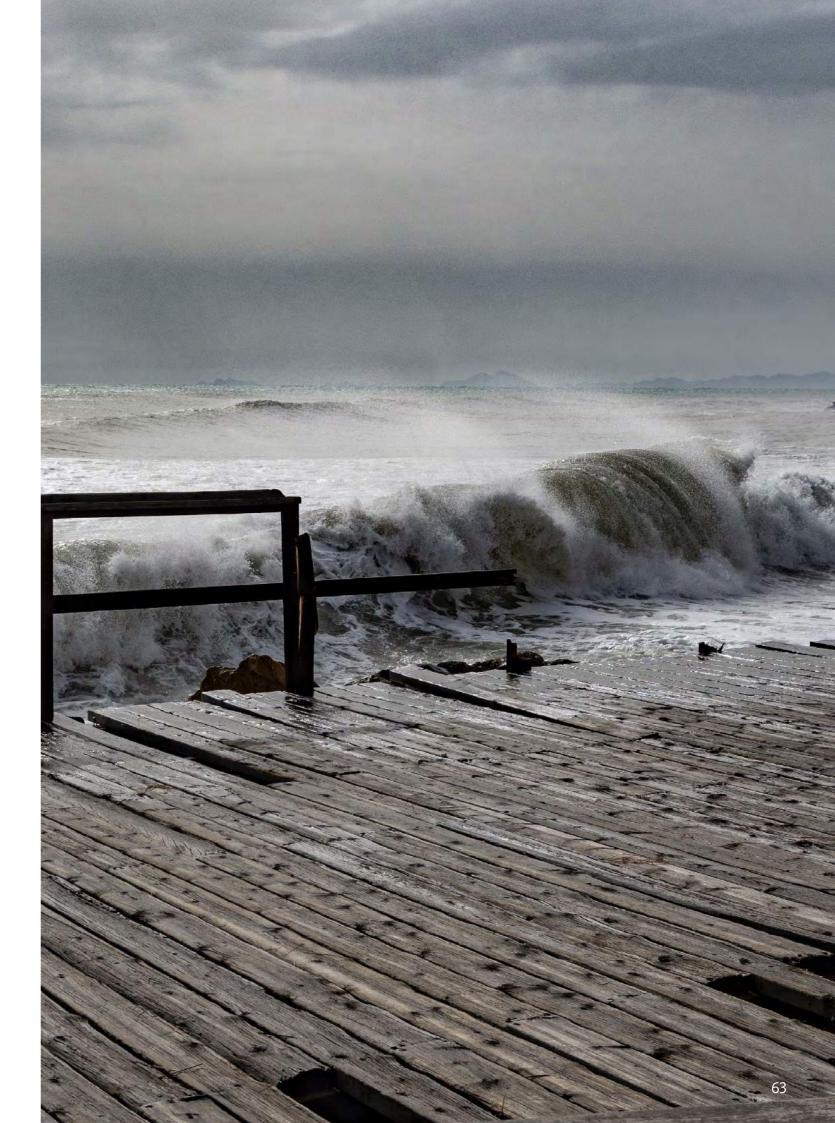


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