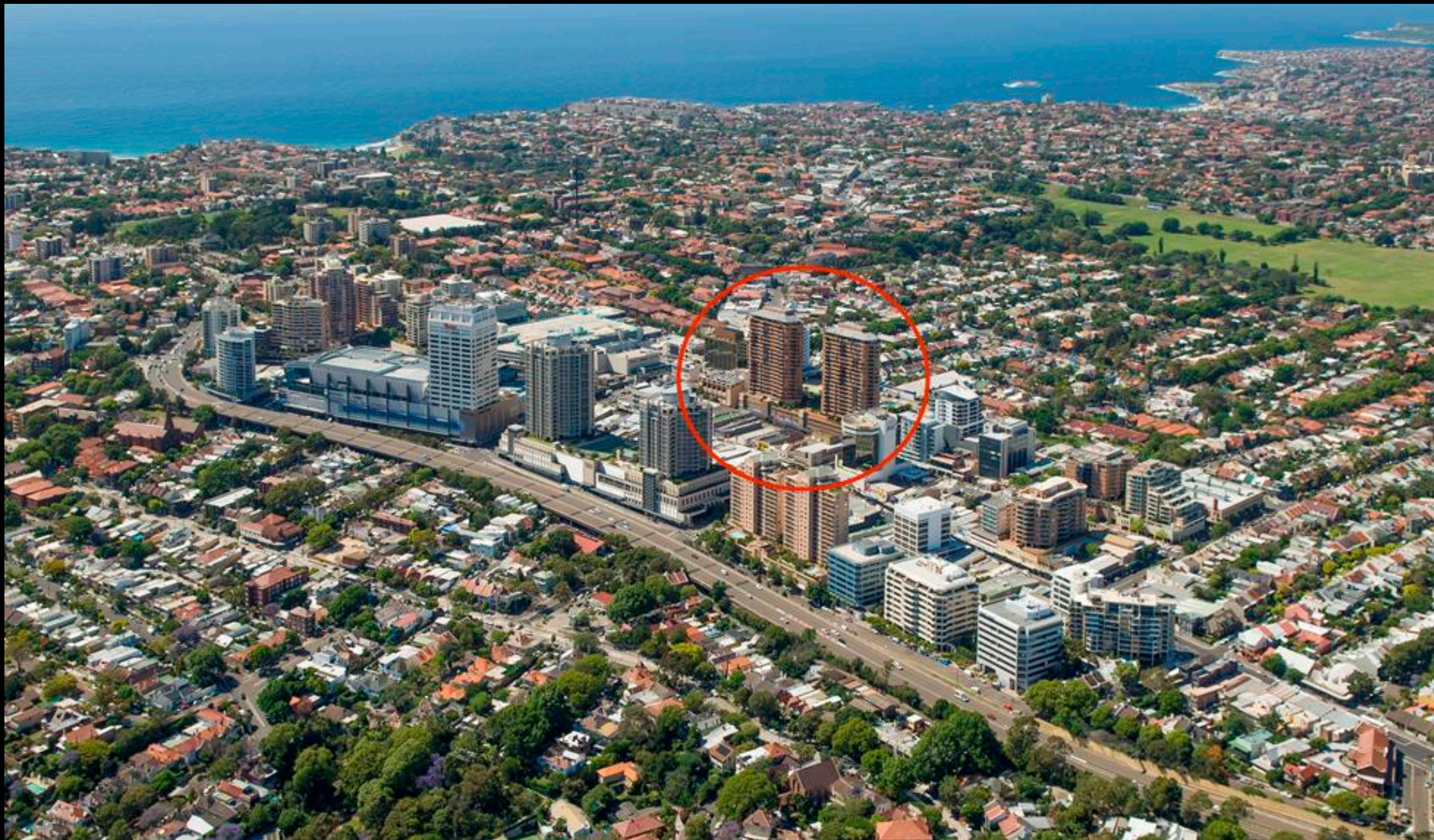


CASE STUDY

Eastgate Gardens is a large two tower 223 apartment complex sitting atop a shopping centre and council car park.

The towers are 30 floors. The top levels of each tower house the plant room, boiler room and lift motor room. On the 30th March 2009 the east tower was incapacitated by a gas explosion.



When disasters happen
there is usually no
warning



Most of the east buildings' essential services were compromised rendering the building uninhabitable.

Residents would not be able to return to their homes for almost 8 months

The final insurers bill was almost
\$18m

Of that \$3m involved relocation
expenses and approximately
\$1m went to solicitors,
accountants, administrative
personnel and associated
management expenses



One doesn't need to fly a plane into a building to destroy it.

If a building's service infrastructure is compromised the building becomes uninhabitable.



The weakest points of a building are its essential services - almost always at roof level.



CCTV footage

2 hours before the explosion plumbers bring in specialised equipment for working with gas and have a final consultation with the building manager



30 minutes before the explosion the plumbers ascend to the boiler room to make last minute preparations before the gas is turned off



4 minutes before
the explosion a
woman enters the
building

CCTV footage



2 minutes before
the explosion the
woman exits the
lift to her floor



12.44

A large explosion shakes the building and a pressure wave descends through the apartments - the fail-safe mechanisms of each lift activate freezing them.



For the next 2 hours the cctv record
60,000 litres of
water pouring from broken water pipes
into the lifts, air shafts and other other
areas flooding many of the upper floors



CCTV footage

7 minutes after the blast - the fire brigade and the building manager attempt to access the lifts - the distraught plumber's employer is desperately trying to contact his workers by mobile



7 minutes after the blast fire brigade and manager attempt to call the lifts - a second building manager, who happens to be onsite turns up



Two plumbers are injured - they make their way down the fire stairs unaided - some 20 minutes later they are taken to hospital

Helicopter view and view from the street



What constitutes a building's service infrastructure?

Water
Lifts
Toilets
Electricity

Ventilation
Garbage disposal
Heating and cooling
Fire safety systems

Phones
Intercoms
Security access
CCTV



One way to visualise a highrise is to think of it as a huge machine with offices or apartments hanging from it.

So what happened?

Plumbers were working on a gas supply meter



Boiler Room



The gas had just been turned off, but there was still a large amount under pressure in the pipes.

This is usually burned off in a controlled way until there is no more gas.

An uncontrolled release of gas took place.

20 seconds later it ignited.

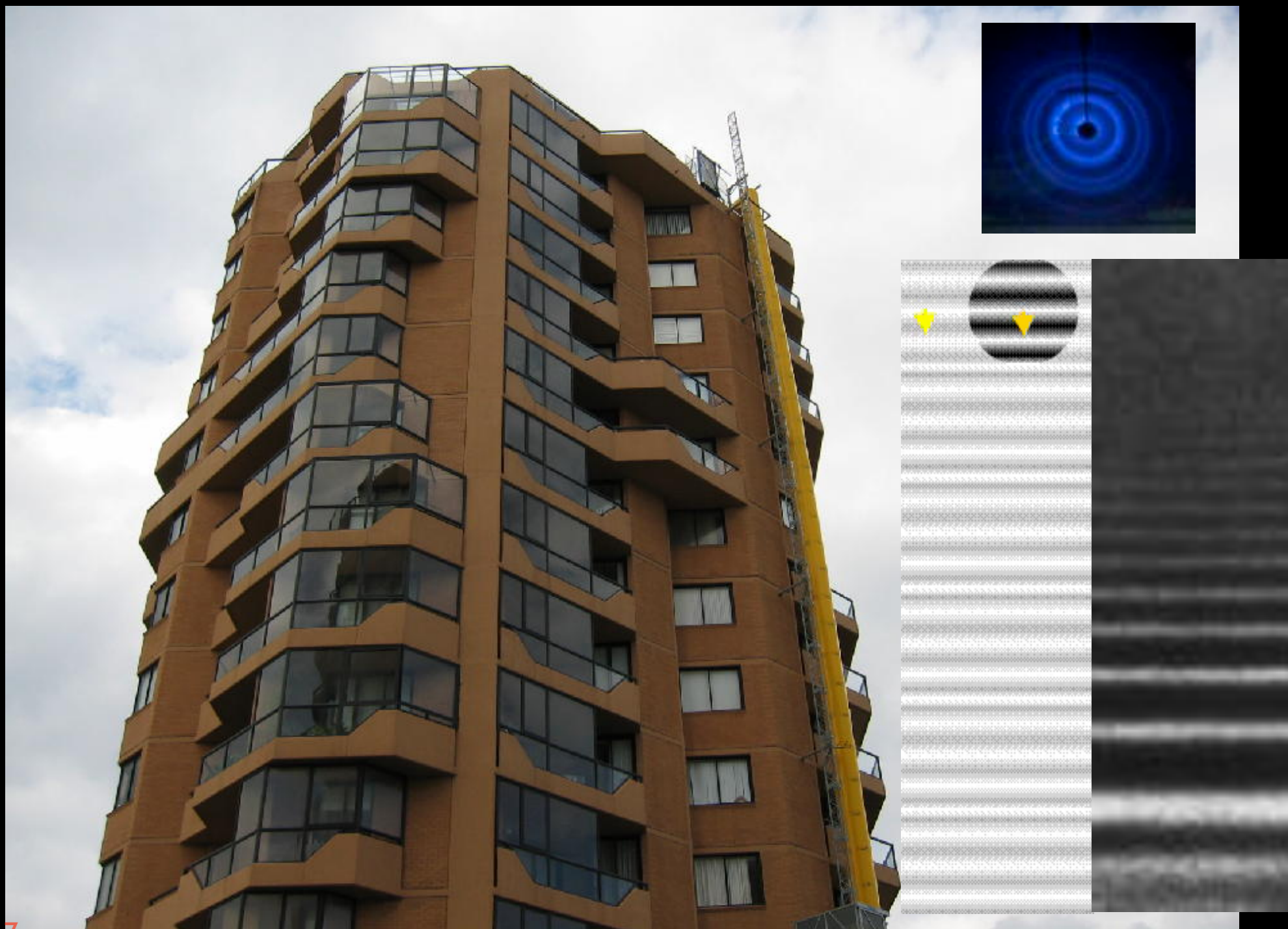


And did a lot of damage



Plant room wall 30th floor

The explosion rippled through the building in an uneven manner, like an interference wave, damaging groups of floors or apartments but leaving adjoining levels or units unaffected.



Two Days Later

vast spread of internal damage all the way to the 10th floor



The towers are exposed at a high point on a ridge near the coast - to make matters worse, the ensuing days brought inclement weather and a major storm. The upper levels were open and unprotected due to Workcover having quarantined the area and refusing to allow anyone up there to erect tarpaulins.

In the initial explosion a huge amount of water cascaded through the building from the 60,000 litre water tank. During the storm more water flooded into the building but for a longer period - this significantly exacerbated the damage and hazard issues.

The first thing Workcover asked for was the Safe Work Method Statement

Safe Work Method Statement	
COMPANY DETAILS <i>THE PLUMBING & ELECTRICIANS PTY LTD</i>	Project Name and Site Address: GAS REPAIRS - OCEAN COURT EASTGATE GARDEN APARTMENTS, 71 – 91 SPRING ST BONDI JUNCTION _____

So what is a Safe Work Method Statement?
And why should you worry?

When the Owners Corporation hires contractors, unless determined otherwise, the OC may be deemed to be a principal contractor.

The OH&S regulations have a number of safety requirements - one important one is the requirement that the principle contractor “*ensure that each subcontractor provides written safe work method statements before commencing work*”.

THE FIRE BRIGADE I

Further damage occurred when the fire brigade smashed open apartment doors and a number of fire stair doors.

This left 25% of units vulnerable to theft and fire.



If you thought that the Fire Brigade used master keys in the fire stairs - think again - the only keys they use are the axe and the sledge hammer.

This posed a major problem affecting security, safety whilst raising the spectre of opportunistic looting - entire floors were left completely open and unprotected. In the first two weeks the security bill alone was \$64,000

THE FIRE BRIGADE 2

Lessons learned

- 1 High-rise apartment buildings are likely to have a proportion of elderly residents who may be unable to manage stairs. If lifts are not working, evacuating a high-rise residential building will require considerable additional resources.
- 2 Carrying a person down stairs requires at least two people. Wheelchairs require at least four, so that carriers can be rotated.
- 3 The ambulance service has folding chairs that can be used for carrying people down stairs. Ordinary steel frame chairs can also be used.
- 4 **If possible, allow people to gather their medications, wallets and mobile phones before evacuation.**
- 5 **Whenever possible, maintain lighting to the fire stairs. If the power has to be shut off, an adequate alternative lighting system will be required.**
- 6 If two sets of stairs are available, consider using one for operations and the other for evacuations.
- 7 Crew management is an issue. Make sure sufficient resources are allocated to ICMS functions.
- 8 **Set up an evacuee assembly area as soon as possible to ensure that police can record the names and unit numbers of evacuees and identify those who are missing.**
- 9 Call the District Emergency Management Officer (DEMO) as soon as possible to assist with logistics and recovery operations.
- 10 Call for engineers as soon as possible to assess the structural integrity of the building. Engineers may be sourced from the local council or through DEMO

BUILDING MANAGEMENT

By the evening of the first day the Building Management firm had organised:

- Additional managers and staff who operated on a 24 hour roster. Some of whom slept on-site on the office floor for several nights
- Brought in sizeable number of security personnel
- Brought in workers and organised for tradesmen to “make safe” the building
- Started the damage assessment process
- Organised building plans, residency manifests, service manuals, documents of infrastructure and secured the building
- Liaised with the police and fire brigade
- Physically assisted residents

THE STRATA MANAGER

- It's a tribute to the strata manager that within an hour of the explosion she had alerted colleagues, informed the insurance broker, collected essential documents, was trying to contact EC members, and co-ordinate with the building management firm
- The Strata Management company dealt with the media and built a wall around the rest of us so that we could get on with our work. They copped the brunt of abuse (attribution theory), but they did their job professionally
- In the weeks that followed they would become the administrative arm not just of the OC but also the insurer
- They would allocate a significant amount of resources in keeping track of people, emergency payments to owners, attending meetings, organising lawyers, accountants and other administrators as well as doing the usual OC administrative tasks
- Most importantly they tried to assist displaced residents

Information

ON DAY ONE at around 6.00 pm Easts Leagues Club next door made one of their halls available. We quickly plastered notices around the building and verbally told people that there was a meeting in Easts at 7.30 pm.

The strata managers sent in staff to assist the building managers and police in developing a people contact manifest and trying to organise residents.

We were able to track a number of people who had alternative accommodation at friends, relatives or if they were quick, local hotels. Then we ran into the first problem - information. Whilst we told people everything we could - most of what we had to say was indeterminate. We just couldn't give people definite information and there was a reticence by those involved to speculate on the probable cause of the event as potential legal issues cast a powerful shadow over those of us on the front line.

The Police

That night the police incident supervisors went home and at 1.00 am junior police held an impromptu meeting and announced that everyone could go back into the building.

The building managers were not consulted.

There was an uncontrolled flood of people up the only operative fire stair - the other having been damaged as the blast migrated down the building to the 10th floor.

Management argued with police while security tried to control the situation.

Habitation Problems

People used toilets unaware the water to flush them wasn't flowing. There were no showers or taps running.

Garbage which is removed overnight, started accumulating. Electricity was only working on some floors, while emergency lighting operated on others. Fire safety systems were compromised throughout the building because of the blast.

Some people even started moving furniture and baggage down the only fire stair, creating a potential hazard to people coming up.

In the early hours of the morning management and security had a semblance of control and made everyone show identification to get in.

By morning they had them sign in as well.

The next day management started asking people to move out and find alternative accommodation.

Most did.

By the evening of the second day only **three people remained in the building.**

It took social workers, counsellors, family and administrative staff to convince them to leave.

The Importance of Information

On the third night we held a previously scheduled EGM at Easts.

We used this as a forum to disseminate information.

We also invited two people from the

Office of Fair Trading

to explain respective rights to Owners and Tenants - they were extraordinarily helpful.

At the meeting a number of major problems became evident:

- We disseminated a lot of information some in writing but mostly verbal - it only became apparent after the meeting that many people seemed only able to assimilate two or three points at a time.
- In the days following we were approached by many residents asking questions or raising issues - some had to be told the same thing several times and even then it didn't always register.
- Although elderly people were mostly calm many were unable to digest all the information given. Middle aged males and females generally, tended to grasp matters and look for solutions - at the meeting they asked the most useful questions or raised the most pertinent issues, while two younger males who were simply looking to apportion blame for the event became agitated and aggressive.

And what of the two injured workers?

There were grave fears for the two men when it was reported that both were under sedation and were being artificially ventilated. Fortunately neither suffered internal injuries as was first feared.

The younger of the two was discharged from hospital after a few weeks.

He had the equivalent of bad sunburn.

He stated he would never go back to plumbing.

The remaining plumber suffered more severe burns to his wrists, ankles and above his eyes. He remained in hospital for two months and required minor skin grafts. He is now back at work for the same firm
... as a plumber.

I spoke to the plumber's employer in the days immediately following the incident. There was only one way to describe him -
he was seriously distressed.

The firm is still operating and he is waiting for a verdict from Workcover.

BY DAY TWO we were telling people that they should plan to be out of the building for at least one to two weeks. By day three that time frame extended to at least a month.

The strata managers had swung into action on day one and had liaised with the insurance assessor and insurance broker to determine what the OC policy could do directly for people.

On day three, at the meeting we informed people that **the insurer would pay two weeks emergency accommodation up to \$1400.00 a week and thereafter the rental rate for their apartments until they could return.**

We informed them that they should expect to remain out for at least a month but plan for more.

Psychological Responses

The response from people over the first three days varied from shock and disbelief, to a sense of being displaced from their home, whilst others pragmatically accepted what happened and acted quickly to deal with their situation. Others were looking for someone to blame (attribution theory) but couldn't decide who, whilst many were passively relying on being directed in what to do.

1. The initial response was generally tempered.
2. After day one there were two additional responses - anger and disbelief.
3. By the meeting on day three there was a palpable rise in anger primarily amongst younger males.

Media

The media generally behaved well. They were after a story - the more sensational the better. We gave them the facts but avoided opinion, comment or speculation and we limited their attendance at meetings. By and large we had no complaints.

The Sydney Morning Herald for some reason were so aggressive in their questioning and their persistence that they disturbed people trying to manage the disaster - the tone of their questions gave the impression of looking for someone to blame - that tone was markedly different from all the other journalists.

The disturbing effect of this on all of us trying to deal with the catastrophe was such that the insurers in the US agreed to fund a public relations firm. We found that even after everyone had dropped the story the SMH were still pursuing it several months later. One such article resulted in a report from the plumber's loss assessor that they had received an increase in aggressive phone calls

The Insurance Assessor

The insurance assessor was on the scene the next day. Her role in administering the claim was not only to determine the extent of damage but to initiate and oversee the rebuilding process.

Most importantly she set up via the strata managers the means to establish and maintain a register of owners and tenants with their location and contact details to facilitate emergency payments and disseminate information.

Money started flowing fairly quickly, though haphazardly, due to people having dispersed without leaving contact details.

But it wasn't long before the accommodation cost to Chubb approached \$85,000 a week.

The assessors were flexible and three apartment owners got paid tickets to the US rather than stay here, one went back to Hong Kong and a fifth to the Gold Coast - it being cheaper and more convenient than the cost of alternative accommodation.

The Insurance Assessor 2

Contrary to the public perception of insurers, our experience to-date was that they seemed to pull out all stops to get things under control and people safely into the building as quickly as possible.

Within days Chubb's assessor had organised a formidable team of engineers, builders, architects, project managers, lawyers and other consultants and by the end of the week the planning process of 'making safe' and rebuilding was underway.

Probably the most impressive act in the whole event was the demonstrated ability of the assessor and her colleagues to quickly bring to bear and command a huge arsenal of resources to tackle the problem of rebuilding.

Lawyers

Lawyers were involved in a number of aspects of the event.

Firstly the insurer retained her own lawyer.

The Strata needed a lawyer to vet contracts and other associated matters.

The plumbers' insurer retained counsel as did the plumbers.

Some residents attempted to develop a class action against the strata committee.

The Strata Committee

- Three out of the nine members were directly affected, another two indirectly affected and two were unavailable due to work commitments
- In the end, the load fell on the Chairman and Secretary
- We relied on the the people around us to give us the right advice and information
- The whole exercise was a team effort and it worked as well as it did only because of the professionalism of the actors involved
- **COMMITTEES MUSTN'T UNDERESTIMATE THE TIME AND ENERGY THAT IS REQUIRED!!!**
 - Committees and office bearers cannot abrogate their responsibilities although they may delegate functions. In the end the responsibility for the strata resides in the committee.

The Plumbers

An long investigation was undertaken by
Workcover

Charges were eventually laid and the matter
went to the NSW Industrial Court almost two
and a half years later

The plumbing firm was fined \$80,000 and its
director \$18,000

Lessons for Residents

1. Engage in self help. Don't rely on authorities to help you. Essentials: money/credit cards, communications, documents (cloud), medications or scripts (cloud), accommodation.
2. Make sure people know where to contact you. Keep in touch.
3. Have contents insurance! Unless agreed the building insurer will not pay for items normally covered by contents insurance.

Lessons for Strata

1. First requirement of any emergency - information. Have a designated location where people can be accounted for and a contact for them to get information. The strata, building manager or committee need to maintain a list of residents. With short-term letting Airbnb this may be a problem.
2. Ensure your strata and building managers know what steps to take in an emergency that is, who to get in contact with and how to get additional staff to assist with management and administration.
3. Check your building insurance to make sure additional strata and building administration costs are covered and make sure owners are covered for accommodation.
4. Make sure you get appropriate insurances from tradespeople and a safe work method statement.

END