

# Fighting dirty

Dominic Brittain, Chairman of the Hong Kong Standing CBRN Planning Group and Senior Bomb Disposal Officer of the Hong Kong Police, tells Gwyn Winfield about the challenge of CBRN incidents in high population density areas

**H**ONG KONG is always going to be an interesting case study; part of China yet at the same time different, a port, a financial centre, a transport hub, a leisure destination, a major population centre and an island – how many more targets do you need? It was hit hard by both Sars and bird flu and is probably one of the most attractive terrorist targets in China. As such, Dominic Brittain is never short of things to do.

Hong Kong is also an interesting case study when compared to another Asian island city (state) that shares many of its characteristics – Singapore. Mr Brittain agreed there are parallels, but made clear that the approach between the two is quite different. “I have been to Singapore a lot – I’ve done some lecturing there and seen what they are doing,” he said. “I have a great deal of respect for them – they are committed and serious when it comes to this stuff. There are some fundamental differences between us, though. We tend to be fast and dirty, and they are slow and beautiful. They have huge amounts of kit and military back-up; it takes a while for them to get down there but when they do it is an extremely good response – world class. We, however, are down there in the first few minutes of the incident and are trying to mitigate it, either by taking it apart, or mopping up what has come out as fast as possible.

“The problem is that we have got a far higher population density than Singapore; evacuating 2km downwind by 100m cloud width is impossible – we would be talking about evacuating 250,000 – 500,000 people. We couldn’t do it even with the shelter-in-place

procedures we have. We have approached it from a different angle: ours is all about speed, getting those guys onto the scene as fast as humanly possible, mitigating the device and bringing it in.”

## Fast and dirty

As Mr Brittain suggested, the Hong Kong reaction is all about speed, and as such the Police’s CBRN team is small and light – almost unbelievably so. “We have a fair amount of assets for both IEDs and CBRN,” he said. “For IED we have an IEDD response capability with the Police EOD; it is an advanced world-class organisation capable of mounting six teams simultaneously. They get called out about 150 times each year and are capable of dealing with any type of IED. On the CBRN side the Police EOD is capable of mounting two CBRN teams, immediately available and deliberately light-weight – two men in each team. The team is fully air transportable, to be picked up by a helicopter with their vehicle and dropped to deal with the device itself, or if the device has been actioned they will leak, seal and package, and deal with the large puddle or powder of agent itself. Fire service do the decon of people and property after the event and we have hospitals and the Department of Health to deal with casualty treatments and labs to deal with identification of the agent. There are nine different agencies involved in any incident – Hong Kong Observatory give us down-wind distance and likely cover and spread of agent, etc.

“The team itself is self-contained; they rock up in their Land Rover and have a trailer that also goes under the

helicopter. They have all the equipment and protection they need: level-A suits, the same level of IPE as the UK, they have their own air tanks and they have their own decon assets for their own gross decontamination – we have set up a system for decontaminating them and what they have brought out of the hot zone. We did a lot of work on the decon system, as it is only a two man team. For the set up we use a normal police emergency unit – four men to a car – and that car helps us set up the decon site using a map and plates that we throw out on the ground. Each plate has a number, each piece of equipment has a number and they have a picture and map and they set it all up. That is all being done while “Number One” is suiting up and going forward; it will be set up while he is down-range. They will have had no prior training for this, which is why it is designed to be easy to follow. Meanwhile, “Number Two” will be mixing up the decontaminants, to ready himself for number one who will either have defused the device or done leak, seal and package. The whole aim is that we have a Number One walking forward within ten minutes of arrival at the scene.”

“This is not a cavalier approach from an island that is protected from terrorists by its big Chinese brother. China also has terrorists – East Turkestan Liberation Organisation et al – but Hong Kong reaps the whirlwind of being an open, multi-cultural society, which can lead to extreme views. “China does have its own terrorist problem, such as the Eastern Turkestan Islamic Movements and other Muslim separatists who have interests in attacking targets in China and have done so,” said

Britain. "But another problem that Hong Kong has is that we a large multicultural city with iconic buildings – such as the world HQ of the HSBC bank, a large US contingent, US, Israeli and UK consulates – and as such we have a problem with home-grown al-Qaeda, Jemaah Islamiyah, etc."

Yet despite the fact that Hong Kong has had a chemical IED attack, Dominic Brittain is robust about the threat. "Our main problem is conventional IED and WW2 munitions with standard explosives," he said. "We do have some callouts for old Japanese-era chemical filled warheads, but they are not as common as you would be led to think by the press. So our main threat is IED, and while we have a CBRN response capability for terrorist use we don't consider it to be much of a threat at the moment. All our intelligence assessments suggest that it is more of an IED problem and not so much CBRN."

This is more remarkable when the events of April 2007 are taken into account. Mr Brittain noted with approval that the news of the attack had not made the international press. Certainly the UK government would have taken great delight in making use of a similar event in the current terrorist climate, yet Hong Kong seems to have taken it in their stride. "It was an interesting case," said Brittain. "I have spent 20 years setting up exercises – and we all know that we pick these exercises out of the air and don't know what is really going to happen – and when we finally get an incident it is like nothing we have ever run. It was criminal, rather than a terrorist attack, done not against people but horses on a racetrack. They buried 30 mortars under a racetrack and were using a pneumatic system by radio control to fire carriers – each one carried a chemical agent that would be injected into the horse with the intention of affecting the outcome of the race. Betting is a major thing here, if you put a \$10 bet and successfully guess which three horses will come first in three races then you will get over \$20million! This mortar was designed to affect more than one race; while we know what the agent was, because it is all sub-justice I can't name it. I have been running exercises for years and if I



*The only way to really see the city! Hong Kong specialises in a ultra rapid CBRN response formce. ©Hong Kong Police*

**Book Now! CBRNe Convergence, 22-24 September, JW Marriott, Bucharest - More Information on [www.cbrnworld.com](http://www.cbrnworld.com)**

# Fighting dirty

set that one up for my guys they would look at me and say, 'Sorry boss, I think you have gone bonkers.' Yet there we were, down there dealing with it; it makes me question the benefit of all the exercises that we run."

## Now wash your hands

While that covers off the chemical side of the piece – and an innovative (certainly unique to my knowledge) one at that – Hong Kong has also had to deal with many of the facets of a bio release. In Western Europe and North America it is easy to forget about Sars; the impact was limited and by the time it arrived in the West it was well understood. East Asia bears the brunt of being the mixing crucible for many of these natural outbreaks such as bird flu, and Hong Kong, with its high population density, is a crucible par excellence. Mr Brittain admitted, however, that when Sars appeared out of the blue it provided valuable lessons (though bought at a high price).

"We had both reinforcing lessons and new things that we picked up as well," he said. "One of the big reinforcing lessons was that the RIAG (RBC Incident Advisory Group) system was superb, but we didn't have anything like that for a naturally occurring outbreak. As a result we set up another organisation, the Centre for Health Protection (similar to the CDC), and a lot of their methods are modelled on what we do for CBRN. So it was back to front, but CBRN ended up pointing the way for the response to disease outbreak. We stood up and dealt with it as a government that had not done a huge amount of pre-planning on natural outbreaks. The planning had been done by the Standing CBRN Planning Group (SRPG) for smallpox outbreaks and the use of places for short-notice quarantine for Sars, so we took the smallpox planner and just implemented it. In terms of lessons picked up, it reinforced the absolute lessons of honesty; we didn't know what it was or how best to deal with it and we had people dropping like flies – we lost several hundred people to this in Hong Kong, including many people I respected in the medical profession. We learned again that when you are dealing with the public and you don't know what is going



*Even though it can mean people get in each others way, Hong Kong believes in simultaneous action ©Hong Kong Police*

on, you really need to say 'We don't know what is going on'.

"We tried to find out was going on and then gather the public trust by telling them that. We relearned the importance of basic lessons; we were asked in the SRPG for recommendations and we said 'Wash your hands and wear a face mask' – this went back to the 1970s when I was taught by the military that the best things for a bio attack were good personal hygiene and wearing a mask. Basically that's what we told the public, and there was a government backlash – 'Is that all we are going to tell them? Don't we have something sexier than 'Now wash your hands' [A familiar slogan from British schools and public health]? And the answer was, 'No, Minister, there really isn't anything else; one of the most important things we can get people to do is improve personal hygiene'. As usual there was the importance of talking to each other – medics, police, EOD. Good communications was underlined by Sars."

At first it would seem an odd decision to use the smallpox planner as the transmission rates are different from Sars, but Mr Brittain confirmed it was utilised under the same concept that the

British Army uses for training – once you can do high-intensity warfighting then everything else is easier. Yet one of the traits that has not transferred from the military is the reliance on situational awareness and hazard prediction and modelling. Much the same way that Hong Kong's response is quick and dirty, so is their control of the incident. "Some of your readers might not like this answer, but we think that a lot of those systems [computerised plume modelling] are a load of rubbish," said Brittain. "I am quietly proud of the fact that I can reach out on my desk and grab the two things that I need: the M2 Calculator, for calculating downwind hazard, and a smoke grenade. With the M2 I can get as good a crude generalisation of the spread as I can from any of those systems. When we are down there we set up a portable EOD weather station, which automatically takes wind direction, temperature, etc, and that gets sent back automatically to the observatory so they can plot it into their predictions. But the other best thing, after the calculator and the massive computers at the observatory, is the smoke grenade. The EOD operator at the scene pops a smoke

# YES, YOU CAN!

...afford to integrate the best bio-detector available



...use it on any platform from Naval vessels to Recce Vehicles



...let Dycor relieve you of the burden of system integration



...take advantage of 99.9% uptime, proven and documented in the harshest environments



Dycor's standard CFLAPS bio-detector

The time to act is now! Never before has this much capability been available at such a reasonable cost, fully integrated or in the world-leading CFLAPS package.

Contact Dycor at [sales@dycor.com](mailto:sales@dycor.com),  
[intsales@dyor.com](mailto:intsales@dyor.com) or by telephone  
at +31 634027235

[www.dycor.com](http://www.dycor.com)

**DYCOR**<sup>TM</sup>  
The Intersection of Innovation and Technology

# Fighting dirty

grenade and sees which way the smoke goes. Because of micro climates it gives us the best indication of where it is going to go and the downwind hazard and where we need to plot. Could you accuse us of being rough and ready? Yes. Could you say that it doesn't work? I would say that it definitely works and we are happy with it."

This isn't to suggest that the incident management and C2 is dealt with in the same way, however, "[Situational awareness] does exist; I shouldn't make it sound like we are too agricultural," continued Brittain. "There is automatic vehicle location on all police and fire vehicles; there is a good police command and control [C2] system that is co-ordinated with the Fire C2. Silos of information are stopped through the CBRN Incident Advisory Group (RIAG); this is made up of five experts from the five main departments who form up by telephone conference wherever they are. They just drop everything – they have laptops with all they need, such as mapping, and they form the immediate advice on the response and act as a way of making sure the information is flowing around – one from police EOD, one from Fire, one from the Department of Health, one from the hospital authority and one from the Intelligence Security Bureau. They are all known to each other; they are in constant contact via pager and they meet once a month to have lunch, etc. They form the core of experts that give the advice as to which way to go. It is used many times as we get a lot of hoaxes in Hong Kong – everything from white powders to more complex hoaxes and also the chemical dispersal device in April 07."

## Home-grown capability

While there might be shades of the London Emergency Services Liaison Panel (LESLP – the 'Crown Jewels' of London's emergency response), Hong Kong cannot be seen as a vindication of British methods – they are Hong Kong home-grown. "The handover happened in 1997 and I would question how good the British doctrine was in dealing with CBRN attacks in 1997," countered Brittain. "I would question whether it was any good at all. Before the handover we recognised that we had to do this on

our own, so we started it in 1993, two years before Tokyo, so we had a head start on a lot of people. We have done a lot of thinking over those years and had many hoaxes and one incident to make it work. This is where the fast but dirty approach has come from – get there fast and mitigate the consequences by the speed of reaction and quality of people that you are putting up there, rather than having huge numbers of people on three-year attachments with lots of beautiful kit."

Speed comes with its own attendant problems, however, and the most major of these is forensics. The collection of forensic evidence is painstaking and slow, it requires the least manipulation of the crime scene – not something that is likely with the Hong Kong approach. Mr Brittain agreed it was a problem, but one worth having. "We are very strong on simultaneous action, so while the EOD team are going forward the best possible cordon is being thrown up, and evacuation and decon procedures are underway so the whole thing should happen together," he said. "It is a bit cramped and everyone gets in each other's way, but it is all about speed and that is the way it is done. There is a concern about forensics; if you are fast and dirty then it means just that. So yes, EOD operators will get contaminated but we have procedures for that. Yes, some

evidence will be lost, but we pack up and seal well, and then in slow time we have more normal procedures to get forensics. You will lose some forensic benefits but the priority is saving lives; if losing some forensics will mean less people fall over, twitch and vomit – well, that is what we will do."

While Singapore might be able to put forward a capability in the 'Golden Hour', it is extremely rare to get a concluded crisis response in the first half hour. Personally I think it is very much the yin to Singapore's yang – there will be problems (even danger for the operatives), but the end result of mitigating the device and curtailing of the cloud is well worth it. Singapore will have a greater capability, but the time needed to put it together means a greater problem to deal with; at the same time Singapore's capability costs – and costs big. If countries have a choice and money is no object, then Singapore would probably be the best way to go – it provides health and safety and overmatch compared to the threat. Yet if money is an object it is far better to carry the risk and embrace the Hong Kong school of thought. So many countries, however, aim for Singapore's capability and miss – through lack of thought, effort or cash – while few consider going the other way, which provides an equally effective way of dealing with CBRN.



Hong Kong learned a lot of bitter lessons from SARS ©Hong Kong Police

**Book Now! CBRNe Convergence, 22-24 September, JW Marriott, Bucharest - More Information on [www.cbrneworld.com](http://www.cbrneworld.com)**