

Air Ambulance Decontamination

CASE STUDY

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London, United Kingdom



Air Ambulance Decontamination

CASE STUDY

THE CHALLENGE

It is widely recognised that hospitals, dentists, doctor's surgeries, care homes and other care-related service providers need careful and thorough cleaning services – but that also applies to ambulances and Air Ambulances.

Due to the nature of the service provided by Air Ambulances, there is an important requirement for emergency vehicles decontamination, to ensure safe transport for patients and to prevent and control the risks of infection following that transportation.

The Air Ambulance operation in Southern England, which was operated by a charity, already had regular daily weekly, and monthly cleaning; but it was a cleaning cycle rather than a full testing and emergency vehicles decontamination service, which includes a robust risk assessment and method statement. Having heard of Ideal's capabilities in Air Ambulance [decontamination](#) for another regional operator in England, our client requested a quarterly programme of specialised decontamination for their helicopters and two operational bases.

For Ideal, the challenge was to provide an efficient service between flying and maintenance hours, and to decontaminate and test to exceptionally high levels of cleanliness while using only materials and techniques that were approved and appropriate for the aviation industry.

THE IDEAL SOLUTION

For the Air Ambulances, we proposed cleaning and testing on all accessible internal surfaces of the helicopters to reduce contamination, particularly at touch points.

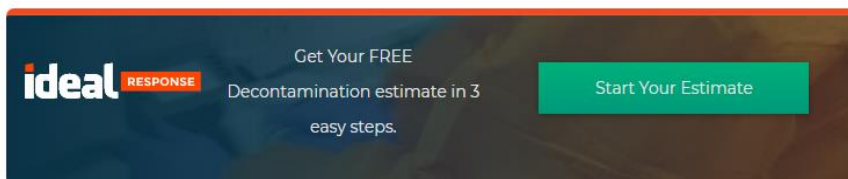
The Ideal Response team made the initial visit to inspect and record contamination levels in a helicopter, where we recorded the highest levels at touch points such as flooring, handles and intercom equipment. Although not excessively high throughout the vehicle, the levels showed that decontamination was necessary.

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Our team then planned when cleaning would be possible, which involved working around flying and non-flying days (which could change rapidly depending on emergencies) in two different flight base locations.

We arrived in full PPE since there was the possibility of biohazards being present, and after certain items were removed for cleaning from the aircraft, we performed the clean using a solution that eliminates 99% of bacteria, viruses, moulds, biofilms, and biological hazards in as little as ten minutes, yet still remains gentler than household bleach. This certified product is fully safe for use on aircraft and has been assessed under the Control of Substances Hazardous to Health (COSHH) regulations.



Following cleaning, waste was taken away in specialist yellow bags as part of the waste control (numbered on an inventory sheet) for safe disposal. The Ideal team then performed Adenosine Triphosphate (ATP) testing which is a method to quickly assess the cleanliness of the tested surfaces. Before cleaning, an example reading of 12,105 Relative Light Units (RLUs) was found, while after our Air Ambulance decontamination, this was reduced to well under 100 RLUs showing that our procedures had been highly effective.

At the same time as managing emergency vehicles decontamination, Idea ensured that the operational bases were clean too. As well as thorough cleaning of the indoor environment, we deployed surface defence using electrostatic sprayers. This creates an unwelcome environment for viruses and bacterium to survive, which means the cleaning we carried out continues working for a prolonged period after the initial application.

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In conclusion, the Ideal Response team worked hard to ensure that the levels of Air Ambulance decontamination, once complete, were within very low agreed limits. We will continue to monitor the effectiveness of the cleaning methodology and product use as part of our ongoing quality assurance. And we are also ready to provide a two-hour response to the Air Ambulance operation in the event of a major trauma aboard a helicopter, which could require swift and exceptionally thorough decontamination.

THE TECHNICAL BIT

The Ideal team used several techniques to deliver the levels of cleanliness required in a care-related environment. These meet and exceed the cleanliness standards set, for example, by the Care Quality Commission (CQC) whose guidelines are audited and monitored, and the National Specifications for Cleanliness in the NHS, for whom we provide planned, and emergency cleans.

For the Air Ambulance decontamination and cleaning of the flight bases, there were three main procedures at work:



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HIGH EFFECTIVE DECONTAMINATION SOLUTIONS

For the Air Ambulance decontamination, we used a patented COSHH-approved product which is capable of killing up to 99.99999% of germs, viruses, bacteria and odours. Our choice of solution has a seven 'log kill' rate – a term used to describe its effectiveness. This is the highest rate measurable, yet the product remains gentler than household bleach.

We use a variety of application methods, since the product is a multi-part aqueous solution that can be rapidly deployed as a foam, liquid, mist or spray. It adheres to any surface and will turn to non-potable water 8 hours after application.

The solution is biodegradable and meets the demands of strict regulatory requirements – including those for aviation since it is a non-toxic, non-corrosive, biodegradable decontaminant. It is also environmentally friendly, contains zero VOCs and is virtually odourless.

ATP TESTING

ATP testing is a rapid method to quickly assess the cleanliness of tested surfaces. Adenosine Triphosphate (ATP) is a micro-organism that is present in all living cells. ATP is responsible for things like photosynthesis in plants and muscle contraction in humans. Most foods and microbial cells also contain a level of naturally occurring ATP and they can be detected as residual ATP as an indication of surface cleanliness.

Therefore, the presence of ATP on a surface shows that cleaning has not been thorough because of contaminants, such as food residue, allergens, and bacteria. We use ATP monitoring and ATP swabs to confirm that ATP has been reduced or by effective cleaning. By monitoring ATP, we can also prevent cross-contamination and verify safe hygiene levels to all our customers.

The Ideal team typically aims to reduce ATP levels to below 150/200 RLUs (Relative Light Units) – and in some occasions we reduce the levels to below 50 RLU's or even to zero. For the emergency vehicles decontamination in this case, we brought levels down to well below 100 RLUs.

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ELECTROSTATIC SPRAYERS

We use electrostatic sprayers in the office blocks at the airbase to discharge a solution which offers high levels of antimicrobial activity, meaning it continues to protect against viruses and bacterium long after the initial application. These sprayers are an important tool in Ideal's huge investment in cleaning equipment, and they are currently also helping in the fight against Covid-19.

The electrostatic sprayers work by firing a positively charged 'cleaning mist' from a backpack or handheld sprayer 70% faster than conventional sprayers. They also use 65% less cleaning solution when compared to a conventional sprayer, which improves efficiency of delivery and lower costs for our customers.



Operations Director

"The whole process was excellently managed by Ideal Response to ensure there was no disruption of service. It is critical to our ability to provide a safe and CQC-compliant service to ensure the working environment both on the ground and in the air is free from contamination."

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