DISASTER RECOVERY & HYGIENE EXPERTS

# Mould Remediation for Flight Cases in Warehouse

CASE STUDY

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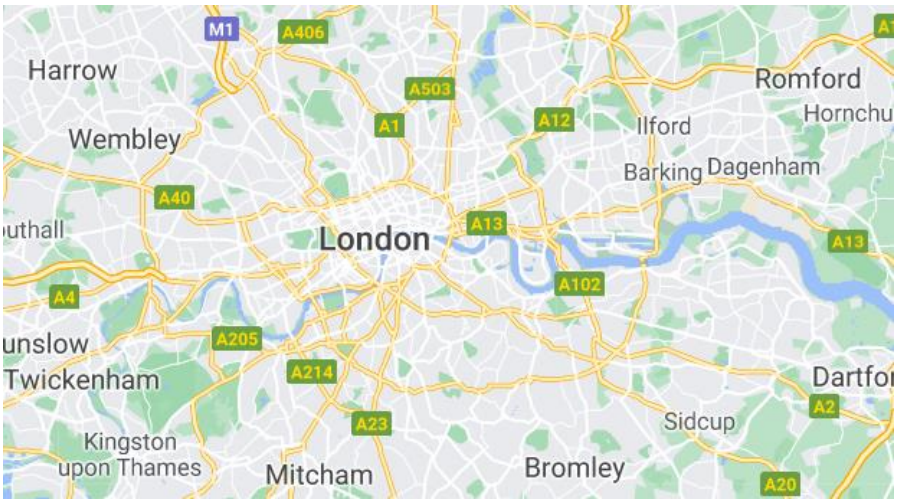


London, United Kingdom

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## THE OBJECTIVE

We were contacted by Stage Technologies for mould remediation to a number of flight cases which had suffered extensive mould damage.

While awaiting shipment from New Zealand, the flight cases were completely saturated during a hurricane. Combined with the storage conditions while at sea, the cases were under the perfect conditions for mould to grow. Mould can start to grow within 24 – 48 hours and depending on the type of mould, can begin to colonise within 1 – 12 days. For mould to grow, it requires food (organic matter), warmth, oxygen and moisture.

The project included removal of the mould and decontamination of the external and internal surfaces of the flight cases. A quick turn-around was required as the cases were needed for upcoming concerts at Wembley by a world famous artist.

## THE BRIEF

A total of 60 flight cases were affected, with 15 of them being severely damaged by mould both internally and externally. The remaining 45 were in very bad shape and still required our attention.

During the site survey, we took a moisture reading on the cases. It read 999 – the highest possible value that can be read. This reading made it clear that the drying process for all cases would be a big part of the required remedial work, along with mould removal, Biosweep and the application of Biosweep Surface Defence.

We would have to liaise, work with, and work around the stage crew who were being flown in to specifically remove the equipment from the cases and carry out PAT testing. To emphasise the extent of the saturation, some electrical parts and wiring needed replacing – something which the stage crew took care of.

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## THE TECHNICAL PART

### Cleaning of the Flight Cases

Using antimicrobial removing agents, we completed the mould removal and sanitation to the external and internal of the cases. This required air scrubbing units in the localised area, to help reduce any contamination as cleaning was started.

Air scrubbing removes particles, gases, or chemicals from the air in a specific area, so without this, the mould spores in the air could potentially re-contaminate the previously cleaned areas/cases.

### Odour Removal and Decontamination

Odour removal and decontamination was required next, which provided the first real issue. Our initial idea to complete the Biosweep process was to build a gazebo inside the warehouse. But with this method, there would be issues in sealing it, and there were other technical staff working in the area. So we decided to bring in an external trailer to complete the Biosweep in. This provided a safer environment and we were able to test for leaks much easier.

Biosweep is an ozone decontamination process, providing permanent eradication of indoor bio-contaminants and volatile organic compounds (VOCs). The Biosweep process employs a five-stage process to produce simultaneous, interrelated forms of oxidation to eradicate airborne organic contaminants and permanently eradicate a number of pathogens, including fungi and other fine particles.

Once the cases had been cleaned and decontaminated, we applied Biosweep Surface Defence. Surface Defence is unique in that it leaves an application on the surface which molecularly bonds to any treated substrate. This process makes the entire material itself antimicrobial, 24 hours a day, seven days a week. This means that the micro-kill continues the removal of any spores after the initial clean, preventing another infestation of mould for up to a year.

### The Drying Process

With the knowledge that each crate will require drying, we faced our second biggest challenge: efficiently drying all of the cases, without heating a large area.

To combat this, we built a drying chamber within a specified area of the warehouse. This smaller area not only allowed us to be more energy efficient, but it maximised the drying potential. Using the very latest desiccants and pressure drying systems, we were able to produce extremely fast and effective drying solutions.

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Essentially, by producing air at a very low relative humidity, we were able to reduce the drying time. Not only did a low relative humidity give us fantastic drying power, it also helps to minimise the risk of mould growth reoccuring.

When drying the cases, we were aiming to reach the British Standard in terms of drying goals – known as PAS64. Continually monitored in line with set guidelines, we aimed to balance the relative humidity and temperature with the kilograms of moisture content.

## THE RESULTS

Once the work was complete, final moisture readings were taken on the cases. These readings showed that all cases were now dry, free from mould and completely decontaminated.

The client, Stage Technologies, were very happy with the completed works and stated that they would be happy to refer us or use us again for future work, commenting:

> "Thank you all for the quick and efficient work to get this resolved for us. Not easy equipment to deal with, I know. Such a breath of fresh air to be working with a team who were so efficient and good to work with, and able to accommodate show crew testing gear alongside the works you needed. Please pass on our thanks to all the guys – both on site and in your offices – who made this all happen."

The whole process was completed in nine days – slightly ahead of the planned handover and completion.

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