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TECHNICAL BULLETIN TB / 048/2: COVID-19 AND AIR CONDITIONING SYSTEMS

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1 CORONAVIRUS COVID-19

The current coronavirus (COVID-19) outbreak is developing rapidly with Government and medical professional advice changing rapidly. This statement is based on the best advice currently available at the time of writing. Government and NHS websites should be consulted for any rapidly developing changes to the situation. This guidance addresses the safe management of common ventilation systems.

2 BACKGROUND

Recent newspaper stories have been widely circulated suggesting that research has suggested that "the coronavirus could be spread by air conditioning systems". There is very little robust research to support this, and whilst there is much that is not yet known about this novel coronavirus, early research published in the Lancet indicated that the primary transmission route is person to person. The current Public Health England guidance on infection control states that "The transmission of COVID-19 is thought to occur mainly through respiratory droplets generated by coughing and sneezing, and through contact with contaminated surfaces. The predominant modes of transmission are assumed to be droplet and contact." (See section 2.1 of the guide). In their guidance on disinfecting business premises in the event that someone is sick, the US Centres for Disease Control and Prevention give is a lengthy list of things
to be cleaned, but it does not extend to the ventilation or air-conditioning system, and this guidance is intended for use where such systems are almost ubiquitous. At this stage there is no reason to consider that ventilation or air conditioning systems are contributing to the spread of the virus.

The recent reports of research from Singapore seem to suggest from finding "traces of the virus" in "an air duct connected to the room of a patient" who had tested positive for the virus, that the natural conclusion was that the virus was being transferred via the air flowing through the duct. Not only is this unscientific because it does not consider the distinct probability that someone has touched the outlet grille and left the trace amount there, but the scaremongering this creates is unhelpful to those trying to get to grips with the reality of the situation.

3 PREVENTION

The primary mechanisms for preventing the transmission of coronavirus remain regular, thorough handwashing using soap and hot water for at least 20 seconds, coupled with strict adherence to social distancing requirements and staying at home. Dilution of contaminated air will reduce risk from that contamination, so it is recommended that any ventilation or air conditioning system that normally runs with a recirculation mode should be set up to run on full fresh air, if that system needs to be running at this time and cannot be shut down. The potential benefit to public health at this time outweighs the reduction in energy efficiency caused by not recirculating air.

Given the requirement for many business premises to close for the immediate future, there is unlikely to be a requirement to undertake work on their ventilation or air conditioning systems at this time. Having said that, any airborne contaminants can be minimised by proper and effective filtration, regular maintenance and, where appropriate cleaning of ventilation systems, as set out in existing industry guidance.

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