



Premier Waste UK removes false alarms in high dust environments with **FAAST** aspiration system

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Application:

- Recycling of construction and commercial waste, including packaging
- Large facility of over 200,000 ft² (main processing warehouse in excess of 98,000 ft²)
- Misting system employed to damp down dust / odours / pests
- Water reserves, fire engine and fire marshals on-site
- New sprinkler deluge system installed
- Process intensive operation, running 24/7

Challenges:

- High dust and moisture environment; prone to false alarms
- Extreme risk of fire requiring earliest detection capability
- Strict insurance and legislative requirements
- 24/7 operation; maximised system uptime essential
- Varying environmental factors in different parts of the facility

Requirement:

- Earliest, most reliable fire detection
- Performance in high dust/moisture environments
- Simple set-up, commissioning and installation
- Simplified in-house maintenance with no need for suspension tower or process shut-down
- Optimal performance in varying environmental conditions

The solution: **FAAST**

- 8 x **FAAST** systems monitoring entire 200,000 ft² facility (replacing over 100 heat detectors)
- Use of moisture traps to overcome high moisture issues
- Simplified ground level testing, with airflow and pressure regulation capability



Waste recycling plants are challenging environments for fire detectors - a high prevalence of dust can cause frequent false alarms in many traditional systems. False alarms often result in unnecessary costs, such as waste redirection, moving stored materials to safety and process downtime. This makes the use of ultra-reliable and accurate fire detection essential for recycling and waste management applications.

Premier Waste UK's 200,00 ft² facility, located in Birmingham, UK represents one of the most challenging the industry has to offer, with its extreme high-dust atmosphere and moisture prevalence; a misting system is in constant use to damp down dust and odour issues. 24/7 operation and processing for the recycling of construction and commercial waste, including packaging, creates considerable fire hazards. In fact, in addition to damping down materials, Premier Waste UK has over 15 fire marshals carrying out fire checks

every 60 minutes, as well as an on-site fire engine, water tank holding in excess of 620,000 litres of water, along with five fire hydrants. Having previously used heat detectors to monitor the site, Premier Waste UK was experiencing a high instance of disruptive false alarms; as frequently as every other day, along with a potential timing delay from waiting for the amount of heat to spike quickly enough to trigger the system.

Challenges and requirements

Premier Waste UK's Operations Director, Wayne Clark, describes the fire detection challenges on site and why smoke aspiration technology was the only solution capable of mitigating risks effectively. "We had been experiencing a high incidence of false alarms and the use of heat detectors didn't provide the earliest warning that would allow us to minimise fire events. Aspiration smoke detection is the only technology that can cope with the extreme environments we face with high particulate levels; a device



FAAST



offering the earliest fire detection was essential. The waste industry is growing and safety concerns are catalysing the rapid evolution of legislation and insurance requirements; today you need to ensure you are doing all you can to exceed the guidelines - we wanted to implement a solution that offered the highest safety provision.

“Environmental conditions can fluctuate considerably from area to area and we required a whole plant monitoring solution. Ease of integration, installation and ongoing use were also key prerequisites; systems can be complex to commission and they need to be set up and maintained properly to be effective – especially under the conditions of high dust and constant water ingress. The maintenance of heat detectors by third party providers was not ideal – we needed an easy, cost-effective solution we could regularly maintain in-house.”

Next generation aspiration smoke detection

Having decided smoke aspiration technology was the only truly effective method, Premier Waste UK installed FAAST; a next generation smoke detection solution from

“Today you need to ensure you are doing all you can to exceed insurance company guidelines... With FAAST we now have no disruptions when testing and maintenance is taking place, no site downtime from false alarms or faults and no third party costs to keep the device maintained... FAAST is great because it auto-learns the environment and can be used across the whole plant - it remains stable even in fluctuating conditions.”

Honeywell offering the earliest, most accurate fire detection, designed to meet the World’s most challenging monitoring environments. FAAST’s ability to accurately identify low levels of smoke (down to invisible concentrations) – even in high dust/moisture atmospheres - made it stand out from the competition.

Wayne explains why FAAST was selected over comparable devices. “The combination of accuracy, ultra-sensitive detection and proven false alarm immunity in high dust/moisture environments made FAAST the most attractive option for us from a safety perspective. Added to this was the devices ease of installation, use and ongoing maintenance by in-house personnel. Designing the pipe infrastructure and commissioning the system was easy with the user-friendly PipelQ software provided. FAAST is also great because it auto-learns the environment and can be used across the whole plant - it remains stable even in fluctuating conditions.”

Adapting to meet needs

Premier Waste UK maximised plant detection coverage with just eight units. Wayne explains how FAAST was configured to meet specific site requirements. “The system was installed with water traps, which prevented issues from water ingress and the system was designed with ground level testing. The use of airlines and pressure vents at ground level meant that we could easily test the system ourselves

(with no need for process downtime or the use of access towers), in just 15 minutes.”

Class-leading fire detection

Wayne closes by highlighting the impact that FAAST has had on site. “FAAST exceeds all expectations and lives up to its claims; false alarms used to be a regular annoyance, but I can’t remember the last one we had with FAAST. Its ability to provide the earliest fire event warning gives our marshals more time to implement counter measures and reduce the impact of an incident. This in turn helps reduce plant/process downtime. We can easily maintain the system ourselves and achieve maximised uptime - no matter what the changing environmental conditions. The system’s unique technology helps prevent pipe blockages and local airline and pressure release valves at ground floor ensure that dust/water ingress into the pipework can be handled without the device going into fault.

“Aside from its performance, ease of use and ongoing maintenance, FAAST has also helped us reduce our operational costs, whilst enhancing safety. We now have no disruptions when testing/ maintenance is taking place, no site downtime from false alarms or faults, no third party costs to keep the device maintained and we’ve replaced the heat detectors with just eight devices. When a fire event occurs, we can now respond much quicker, and this reduces business interruptions as well as risks. FAAST has provided us with a solution designed to exceed insurance and legislative requirements and we are really delighted with its result.”

Visit www.faastr-detection.com for more information on FAAST and FAAST LT.

