100% Safe SHE Bulletin

MORGAN SINDALL CONSTRUCTION

Prevention of Fire : selection and use of heating/drying equipment and automatic fire detection

An incident occurred on a project recently when a Rhino TQ3 heater, (often referred to as a “red rad” , similar to this image) caught fire over a weekend. How the fire actually started has not been confirmed.

The project was a 2 storey timber framed building that was at an advanced stage of construction. The heater fire burnt itself out and there was no injury to persons and very little damage other than localised smoke damage. This was testament to the temporary fire compartmentation that had been progressively constructed (fire doors and fire stopping) and maintained, and the fact that there were no materials stored or discarded in the area that could have fuelled the fire.

The fire occurred sometime during the end of a Friday shift and the following Monday. The usual routine was to turn off all electrical appliances each day on closing and securing the site but on this occasion the heater was left on and on opening the site on the Monday, these scenes were discovered:

Area where heater had been situated.

Remains of the heater

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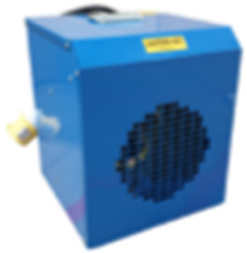
The following points are some of the localised learning opportunities that have been identified from the incident. Whilst they are mandatory for all timber framed buildings, they should be considered mandatory for buildings of all types unless the project fire risk assessment (carried out during the pre-construction phase and reviewed regularly thereafter) determines otherwise:

1. Selection of heaters and drying equipment

Heaters and drying equipment that use concentrated sources of intense heat (heating elements or naked flame) must not be used. Only blown/forced warm air should be used. Whilst 110V warm air blowers are the preference, in large areas they can lack the power to warm/dry large areas so larger scale installations based on oil fired heaters which run on HVO or diesel may be used, with ducting to direct the warm air to the desired location.

X



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2. Automatic fire alarm and detection

All projects require automatic (fire/smoke detection) and manual means of raising the alarm. The only acceptable systems that comply with Morgan Sindall requirements are:

Ramtech WES+
Ramtech WES3
Biosite Mercury

They all comply with EN 54 and they are all wireless systems that link manually operated call points and smoke/heat detectors to a base station. All projects must:

- In both the welfare and construction areas, design the location and layout of call points and heat/smoke detection heads in line with the project fire risk assessment and manufacturers guidelines for detection coverage, and position them accordingly.
- Ensure that should the automatic fire detection be activated out of hours when the site is vacant, the system notifies pre-programmed MS personnel by SMS. All 3 systems have this capability.
- The fire detection and alarm system should be installed at the earliest opportunity, and added to in order to keep up with the progress of the build. The system should be tested weekly and remain in place until the permanent fire detection and alarm system is installed and commissioned prior to handover.

Please direct any additional queries to your local SHE team.

(References : HSG 168, Fire prevention on Construction Sites JCoP, STA 16 steps to fire safety, SHE STD 01, Construction Fire Safety Management)

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