

## Fast, Secure and Quiet Installation of Cable Containment

### Use of Gas-Fired and Cartridge-Fired Anchors

The drilling of anchor points for cable containment systems during a building refurbishment project had to be carried out during specific times to avoid disturbing occupants on an adjacent floor. The use of gas fired anchors provided a rapid, secure yet quiet solution whilst reducing the health and safety risk to operatives. Method statements and risk assessments were generated with the equipment supplier and a control system was put in place for the issue of cartridges and gas.

Where practicable, the specification of fired fixing systems and complimentary materials of construction should be considered during design.



Fixing gas fired anchors to a concrete ceiling



Use of an extension tool

### **Key findings and benefits:**

- gas-fired anchors for PVC conduit and 50mm cable tray provided sound fixings to the concrete ceilings;
- heavy duty cartridge-fired anchors were not found to be effective due impact with aggregate, although tends to be most common in older buildings. This problem could be overcome by specifying materials of construction suitable for such fixings (e.g. finer aggregate concretes);
- PVC conduit and 50mm cable tray could be fitted up to 100% faster than could be achieved if using drilling and plugging;
- the majority of the installation could be carried out without disturbing building residents, thereby removing restrictions on installation periods;
- vibration was negligible compared to drilling, thereby reducing risk to operatives;
- the use of extension tools reduced the need for steps and scaffolds.

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