g. Openings should be provided to allow the air to enter or exit the car park. These inlets should conform to the recommendations of BS 7346-4, and where the vehicle entrances and/or exits are required for the SHEVS, e.g. in emergency mode, the system should ensure that any gates are automatically moved into the fire operational position specified by the design of the SHEVS.

Ductwork, fixings, and smoke dampers

It is generally the case that in car park smoke and heat control systems, ductwork is used together with fans. It is necessary to ensure that the ductwork, its fixings, and any other components such as strike dampers, perform satisfactorily at least as long as the fans in the case of afire.

1. Ductwork and fixings within the car park should be constructed of materials capable of surviving exposure to gases having temperatures greater than or equal to 800 °C and should maintain their stability and integrity under fire conditions.

2. Where ductwork penetrates through a fire compartment wall or slab the ductwork should have a fire resistance at least equal to that required for the compartment or be in an enclosure with a fire resistance at least equal to that required for the compartment.
   Note – All smoke control duct sections should meet the requirements of BS EN 12101-7

3. All smoke control dampers should meet the requirements of BS EN 12101-8

Controls and power supplies

General
Where power is essential to initiate or maintain operation of smoke and heat control systems the controls and power supplies should be suitably rated or protected to ensure that power remains available for the required period.

A secondary power supply should be provided to operate automatically in case of failure of the primary supply.

NOTE This is not necessary when natural ventilation, failing to the fire condition on loss of power, is used.

Controls
1. The system should be initiated by one or more of the following:-
   a. smoke detection;
   b. rapid rate of rise heat detection;
   c. multi-criteria fire detection;
   d. sprinkler flow switch.

Note: A fire service override switch is required as part of any of option a) to d).

NOTE A fire service override switch is not suitable as the only form of initiation for systems designed to assist firefighting access and/ or protect means of escape.