Mr Brown vainly tried to extinguish the fire using a garden hose. Mr Green crawled under other side of the house with another garden hose but the fire had spread through the ducts to the main bedroom.

Mr Brown called the fire brigade.

Blanket approach

There are also lessons to be learnt from this incident:

- Plumbers should keep a fire extinguisher nearby while using oxy-acetylene equipment. AS 1674.1-1997 *Safety in welding and allied processes Part 1: Fire precautions* requires that a suitable fire extinguisher be within 10m of the work area.
- Older underfloor ducting is not fire resistant, and ducts can act as a conduit for fire. Plumbers should take precautionary measures before welding or brazing near underfloor ducting.
- Always clear the work area of combustible material. AS 1674.1-1997 offers informative guidelines for hot work as follows: "AS HOUSEKEEPING – Combustible material that cannot be removed should be covered with a safely secured non-flammable cover", and "Trash, oily rags and the like should be removed".
- A hidden area – for example, behind a heating duct – could contain combustible material.
- Many areas cannot be adequately monitored to respond quickly enough to prevent the spread of fire.
- If there is a risk that heat, flame or a spark could be transferred to such an area, eliminate the risk by using a non-flammable barrier (such as a fire blanket).
- It is possible for heat to transfer to combustible material during welding and brazing, and this can cause a fire. One solution is wetting and wet wrapping of pipes.

AS1674.1-1997 Safety in welding and allied processes Part 1: Fire precautions, Section 2.4, Inspection of site states: "Before hot work commences, the site shall be thoroughly inspected and made safe, or alternative methods of carrying out the work shall be adopted."

Both the ACT *Building and Construction Industry Handbook* and *Safety Handbook* 2002 refer to the Standard.

A better way

If there is a high risk of fire, plumbers should consider other options.

For example, in the above case compression fittings could have been used, negating the need for open flame equipment and substantially reducing the risk of fire.

Proper understanding and on-site assessment will enable plumbers to take appropriate precautions, or consider other work methods to minimise the risk of fire.

Plumbers should also seek the advice of their insurer in relation to cover in the event of a fire that might be attributed to their negligence. ■

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