

Restoring a fireplace

A fireplace can provide an attractive focal point in a room as well as enabling you to install a fire in whatever style you choose. Before you get to work opening up an old fireplace, consult a surveyor to make sure the renovation will not cause any structural damage. To discover the size and condition of the original fireplace, remove the vent on the wall of the chimney-breast. Uncovering the hearth will also give you an idea of the size of the original surround.

Fireplace regulations

Open fires give off toxic fumes, so it is essential the local authority Building Control Officer inspects the work. A certificate of approval will be issued if the work has been completed to a satisfactory standard. Failing to gain certification may invalidate your building insurance.

Chimneys need to be swept regularly. For a list of registered chimney sweeps in your area contact the National Association of Chimney Sweeps (NACS). Details are available on their website <http://www.chimneyworks.co.uk/>

The National Association of Chimney Engineers (NACE) can provide contact details of qualified chimney engineers who will inspect your restored fireplace. For further information visit <http://www.nace.org.uk/>

Unblocking the fireplace

- Remove the skirting board or cut a section out of the skirting.
- Drill a hole in the wall to see what the wall is made from.
- With plasterboard walls, use a club hammer to break down the plasterboard or cut out a timber board with a jigsaw.
- To remove a brick wall, use a club hammer and bolster chisel to remove the plasterwork around the vent, exposing the bricks.
- Hammer the chisel into the mortar joints of the bricks immediately surrounding the vent to loosen them, and continue to remove plaster and bricks carefully in this way until you have cleared the opening.
- Secure the bricks in the original opening, re-pointing the bricks with lime mortar if necessary.
- If the fireback is cracked or worn, you will need to replace it or fill in the cracks with fire cement.
- To see if the chimney is operational, carry out a smoke test by lighting a smoke pellet or a candle under the chimney to see whether or not the smoke is drawn up the chimney. If not, this may be due to a blockage or because the chimney has been capped off - in either case a chimney sweep should be called.

Installing a fireplace

Before you fit the fireback and grate, call a chimney sweep to clean the chimney and inspect the flue for damage. Many pre-war chimneys have leaky flues and will require repair work by a professional.

Fitting a fireback

If you are planning to install a solid fuel or gas-effect fire, you will first need to fit a clay or metal fireback. The fireback should come in two parts: the fireback and a lintel that sits on top of the fireback to form the throat of the fireplace. This lintel has two purposes. Firstly, it supports the brickwork of the chimney breast; secondly, the channel it creates causes the air to flow smoothly up the chimney, thus avoiding turbulent air movement which can result in smoke coming back into the room.

Measure the width of the opening to determine which size fireback you will need. For an irregularly shaped or sized fireplace you can order a bespoke fireback.

- Clay firebacks are usually split horizontally into two or more sections so you may need to separate the sections along the cutting line using a [brick bolster](#) and [club hammer](#).
- Spread a layer of [lime mortar](#) to fix the fireback to.
- Attach two lengths of [fire-proof rope](#) to the edges of the fireplace opening using fire cement.
- Position the first horizontal section of the fireback so that it fits tightly against the fire ropes, sandwiching the ropes between the fireback and the opening.
- Push two lengths of corrugated cardboard cut to the same height as the fireback behind the fireback and secure them with mortar. When the fire is first used, the cardboard will burn away leaving an expansion gap to allow the fireback to expand in the heat.
- Now fill the gap behind the fireback with non-combustible material e.g. loose plaster, rubble and mortar.
- Apply mortar to the top edge of the fireback and position the second section in place, removing any excess mortar from the joint.
- Fill the rest of the gap with non-combustible material. On reaching the top of the fireback, add more non-combustible material to create an incline from the fireback to the wall at the back. This slope lets any soot falling from the chimney fall into the fire and not rest on a ledge above it, where it could ignite and cause a chimney fire.
- When satisfied with the incline cap it with mortar.
- Now fit the lintel on top of the fireback making sure that its front is flush with the chimney breast, and its sloping edge slopes in the same direction as the incline on top of the fireback.

Laying a hearth

According to current Building Regulations, a constructional hearth must be made from non-combustible material at least 125mm (5in) thick to protect underfloor [joists](#). The hearth should be at least 40mm (1 3/5in) wider than the brick opening on each side and should project out from the [flue](#) by at least 200mm (8in).

Stone and brick hearths

- Lay a bed of [mortar](#), about 6mm (¼ in) thick onto the floor in the designated area for the hearth.
- Place the slabs on top, pushing them snugly up against the fireplace opening or surround.

- Use a spirit level to ensure it is plumb before you leave it to set.

Concrete hearths

- Construct a timber frame using battens to act as a mould for the concrete. The battens should be cut to the same depth as the intended hearth.
- Mix up the required amount of concrete.
- Fill the frame with concrete up to the height of the battens.
- Smooth the surface with a float.
- When satisfied the concrete is level, leave to set for a day before removing the frame.
- Apply grout in the gap between the fireplace and the hearth.
- Fill the gap between the hearth and floor with mortar.

The surround

Fireplace surrounds come in all manner of styles - Victorian cast-iron surrounds, tiled, stone, brick, and wood surrounds in rustic, ornate, or contemporary designs. The surround may come as a single unit or in pieces.

- Position the surround carefully and check that it is level. If the floor is out of plumb, the surround may need shims inserted behind or underneath it to level it out.
- Fix the surround to the fireback with fire cement.
- Attach the surround to the wall with the fixtures supplied.
- Use a sponge to dampen the wall around the outside edges of the surround and plaster around the fireplace, filling any gaps.
- When the plaster is dry, replace the skirting boards and flooring.

Smoking chimneys

If, when you light the fire, smoke does not rise up the chimney try warming the chimney with a blowtorch or heater, as cold moist air acts as a blanket to smoke. If this does not work, call a professional sweep to unblock the flue.